



Student Text

MID-LEVEL  
HEALTH WORKER  
TRAINING MODULES

GENERAL  
CLINICAL:

Skin

Dental, Eyes, Ears,  
Nose, and Throat



02098

... A TOTAL TEACHING SYSTEM  
World Health Forum, Vol. 4, 1

35 VOLUMES



## THE MEDEX PRIMARY HEALTH CARE SERIES

After completion of extensive field trials in Micronesia and in primary health care programs in Lesotho, Guyana, Pakistan, and Thailand, the methods and materials of the MEDEX technology have been published as The MEDEX Primary Health Care Series. The Series provides a systematic, practical, adaptable format for management and training in new or existing primary health care programs at all levels.

The 35-volume Series is organized into three major categories of Management Systems Development

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The methods and materials of the MEDEX technology are suitable for national scale programs as well as smaller projects, and can be used in whole or in part as circumstances demand. One of the greatest strengths of the MEDEX technology is its flexibility and sensitivity to local conditions.

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Diagnostic and Patient Care Guides

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**The MEDEX Primary Health Care Series**

COMMUNITY HEALTH CENTER

# **Common Problems SKIN**

## **Student Text**

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02098  
PHC-100

Library of Congress Catalog Card No. 83-80675

First Edition

Printed in U.S.A.

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FUNDED BY THE U.S. AGENCY FOR INTERNATIONAL DEVELOPMENT CONTRACT NO. DSPE-C-0006. The views and interpretations expressed are those of the Health Manpower Development Staff and are not necessarily those of the United States Agency for International Development

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# TASK ANALYSIS TABLE

Diagnosing, treating and preventing skin problems.

Work Requirements DUTIES	SKILLS	Training Requirements KNOWLEDGE
<p>The MLHW will:</p> <ol style="list-style-type: none"> <li>Obtain a medical history of patients presenting with a skin complaint.</li> </ol>	<p>The MLHW trainee will demonstrate his ability to:</p> <ol style="list-style-type: none"> <li>Record the patient's presenting complaint.</li> <li>Ask appropriate questions to obtain information about present illness.</li> </ol>	<p>The MLHW trainee will demonstrate his knowledge of:</p> <ol style="list-style-type: none"> <li>Questioning techniques.</li> <li>Routine information needed to complete a medical history including: Pain, tenderness, itching Other contacts with same problem Medications being taken Contact with irritants Allergic reactions Previous treatment and result Aggravating and alleviating factors Associated problems</li> <li>Medical history forms in current use.</li> </ol>

Work Requirements <i>DUTIES</i>	Training Requirements <i>SKILLS</i>	KNOWLEDGE
<p>2. Conduct a physical examination of all patients presenting with a skin complaint.</p> <p>3. Diagnose the following skin problems:</p> <ul style="list-style-type: none"> <li>Boils/abscess</li> <li>Cellulitis</li> <li>Contact dermatitis</li> <li>Drug reaction</li> <li>Herpes simplex</li> <li>Impetigo</li> <li>Lice</li> <li>Onchocerciasis</li> <li>Ringworm</li> <li>Scabies</li> <li>Tinea versicolor</li> <li>Tropical ulcer</li> </ul> <p>4. Provide treatment and care for patients suffering from skin problems.</p>	<p>2.1 Recognize and identify the following skin lesions and their associated signs: macule, papule, vesicle, ulcer, burrow and pustule.</p> <p>2.2 Record physical examination findings in an appropriate manner.</p> <p>3.1 Use the Student Text and Diagnostic Guides to assist in recognizing skin problems.</p> <p>4.1 Consult the following appropriately:</p> <ul style="list-style-type: none"> <li>Common Problems-Skin module</li> <li>Formulary</li> <li>Patient Care Procedures</li> <li>Patient Care Guides</li> </ul>	<p>2.1.1 Anatomy and physiology of skin.</p> <p>2.1.2 Signs and symptoms associated with skin complaints.</p> <p>2.1.3 Definition of common lesions associated with skin problems.</p> <p>2.2.1 Physical examination reporting forms.</p> <p>3.1.1 Clinical picture, course and complications of listed skin problems.</p> <p>4.1.1 Location and content of reference manuals.</p> <p>4.2 Determine treatment to be given.</p> <p>4.2.1 Treatment prescription for each common skin problem.</p>

## **Work Requirements DUTIES**

## **Training Requirements**

## **KNOWLEDGE**

### **SKILLS**

		4.2.2 Properties of drugs and medications involved.
		4.2.3 Side effects and contraindications.
		4.3 Apply local treatments in the appropriate methods: Warm and cold soaks Application of ointments and lotions Incision and drainage of boils Application of sterile dressings
		5.1.1 Recommended skin care.
		5.1.2 Prescribed dosages.
		5.1.3 Preventive measures for each common skin problem.
		6.1.1 Community education methods and materials.
		6.2.1 Content of community health worker module.
		6.3.1 Guidelines for requesting assistance from other members of the health team.
	4.3	5.1 Counsel patients with regard to skin care, medications and prevention.
	5.	6.1 Conduct family and community education.
	6.	6.2 Instruct community health workers.
	7.	6.3 Contact the appropriate health office for assistance.

**SCHEDULE**  
**Common Problems - SKIN**

DAY 1	DAY 2	DAY 3	DAY 4	DAY 5
Introduction to Skin module Identifying skin lesions Assessing patients with skin problems	Skin problems that are spread by personal contact  Presentation and discussion of impetigo, scabies, lice, ringworm, and tinea versicolor	Community education presentation	Skin problems never spread by personal contact: eczema, contact dermatitis, onchocerciasis, drug reaction	Clinical practice: Group A -Patient care Group B - Patient interview Group C -Presenting health messages
Clinical practice	Case study practice Advising patients	Skin problems not usually spread by personal contact: cellulitis, boils, abscesses, tropical ulcers, herpes simplex	Clinical practice: Group A -Patient interview Group B - Presenting health messages Group C -Patient care	DAY 6  Posttest

# **Introduction**

You have already studied the Anatomy and Physiology, Medical History, and Physical Examination modules. The skills and knowledge that you learned in these modules have prepared you to begin the study of skin problems.

Before you start this module, you must be sure that you know:

- The normal anatomy and physiology of the skin
- How to take a medical history
- How to do a physical examination
- The health risks in a community you surveyed
- How to present health messages
- How to use questioning techniques
- How to give an intramuscular injection

## **LEARNING ACTIVITIES**

The learning activities in this module will help you learn how to diagnose and care for skin problems properly. These activities will take place partly in the classroom. Many of them will occur in hospital outpatient clinics or health centers.

You should have a schedule to show you when the learning activities will occur. More information about these activities is given in each Student Guide.

This training program can only succeed if you take an active part. This means that you have just as big a responsibility as your instructor. You must prepare yourself for each session.

Before each session:

Read the student text and answer the Review Questions that go along with it

Then consult the Patient Care Guides and learn the doses of drugs to use

Finally, prepare questions to ask your instructor about any part of the text you do not understand.

If you do these things before each session, you will learn much more from presentations, demonstrations and discussions.

Instructions about preparation for sessions will not be repeated for each session. Your instructor will always assume that you are properly prepared.

The units in this module will be taught in order, from Unit 1 to Unit 5. Special arrangements will be made for Units 6 and 7.

## EVALUATION

This training program gives you the opportunity to build your knowledge and skills. Regular evaluations will allow your instructor to watch your progress throughout the program. If you are not performing up to the standard, you will be given more opportunity to learn the material. Then your skills will be evaluated again.

The instructor will use the Clinical Performance Records for Levels I, II, and III to measure your progress on the objectives of the Skin module. You should look at these Clinical Performance Records to help you prepare for your evaluations.

### a. Evaluation for Level I (Module Phase)

After five days of classroom and clinical experiences related to the skin module, you must score 80% or higher on a written test.

Also, you must receive at least two satisfactory ratings on each skill in Clinical Performance Record:

Identification of macule, papule, vesicle, pustule, burrow, and ulcer

History taking and physical examination of patients with skin problems

Providing patients with advice about home care for skin problems and ways to prevent skin problems

Delivering community health messages about skin problems

### b. Evaluation for Level II (Module Phase)

After one week of experience in a skin clinic, you must be able to receive three satisfactory ratings for each listing in Clinical Performance Record. These include the identification and care of:

Impetigo	Scabies
Lice	Ringworm
Tinea versicolor	Cellulitis
Boils and abscesses	Tropical ulcer
Herpes simplex	Eczema
Onchocerciasis	Contact dermatitis
Drug reaction	

You must also receive three satisfactory ratings each on:

- Application of dressings
- Application of skin soaks
- Opening and draining boils and abscesses

c. Evaluation for Level III (Community Phase)

After three months of community experience, you must get the required number of satisfactory ratings on your ability to:

- Diagnose and treat skin problems listed in Level II
- Provide patients with advice about home care and ways to prevent the spread of skin problems
- Conduct community meetings to discuss skin problems, their prevention and care
- Train a community health worker to assist with the community health program

## *Unit 1*

# **Assessing Patients with Skin Problems**

## **STUDENT GUIDE**

### **OBJECTIVES**

1. Describe the following skin lesions:

Macule	Vesicle
Papule	Burrow
Pustule	Ulcer

2. Identify these lesions when you see them on a patient or in a photograph.
3. Interview a patient to obtain information about his skin problem.
4. Examine a patient with a skin problem, using the proper procedure.
5. Record findings of an interview and examination on official forms, in the recommended way.

### **LEARNING ACTIVITIES**

1. Learning to assess skin problems through presentations by the instructor, demonstrations, and discussions.
2. Viewing and discussing a slide presentation on anatomy and physiology of the skin and skin lesions.
3. Practicing how to interview people about their skin problems.
4. Observing patients with skin lesions and studying photographs of skin lesions.
5. Interviewing and examining patients and recording findings during one afternoon of clinical practice.

## 1.1 HISTORY OF A SKIN PROBLEM

When a patient comes to you with a skin problem, be sure to ask these important questions.

### *“What is the Problem?”*

Write down what the patient tells you. Use his own words, as much as possible.

### *“How Long Have You Had This Problem?”*

If the problem has only lasted a few days or weeks, you will know it is acute. However, if it has lasted more than a month, it probably is a chronic problem. This information can guide you when you make your diagnosis.

### *“Are You Allergic to Anything?”*

Explain what you mean by an allergy. Your patient may not understand what an allergy is. You should also explain that certain drugs can cause skin problems. Ask your patient whether he has been taking any medicine that might be causing his skin problem. Also ask him if he is allergic to any drugs. You will have to avoid these drugs when you treat him.

### *“Have You Been Working With Any New Chemicals or Other Materials?”*

Many chemicals can cause skin problems. Some chemicals are poisonous. Others produce allergic reactions. Ask your patient about chemicals or materials he uses in his work.

### *“Does Anyone Else at Your Home Have a Skin Problem?”*

Skin problems caused by infection can spread to other people in the patient's family. Lice and scabies are examples of this kind of problem. To cure a patient with lice or scabies, you will have to treat his entire family.

### *“What Treatment Have You Taken for This Problem?”*

Some treatments may make skin problems worse instead of better.

*"Does Anything Make the Problem Worse?"*

Anything that makes a problem worse is called an aggravating factor.

*"Does Anything Make the Problem Better?"*

Anything that makes a problem better is called an alleviating factor.

## 1.2 PHYSICAL EXAMINATION FOR A SKIN PROBLEM

When diagnosing a patient, certain things that you find during the physical examination will help you.

### *Touch and Feel the Patient's Skin*

Touch the patient's skin. Only by doing so can you tell if it is thicker than normal. Thickening of the skin is an important sign of chronic skin problems.

By touching and feeling the skin, you can also tell if there is too much fluid in the skin. This is called edema. In the same way, you can tell if the skin contains too little fluid. This is dehydration.

Patients often feel embarrassed about their skin problems, especially if the lesions are ugly. When you touch the patient's skin, you give him confidence. You make him feel that you are interested in helping him. Wash your hands before and after the examination.

### *Find Where Skin Lesions are Located*

You can often diagnose a skin problem just by knowing where on the body the lesions are located. In some skin problems, the lesions only appear on a small part of the skin. These are called localized lesions. In other skin problems, lesions appear all over the body. These are called generalized lesions.

As you learn about different skin problems, you will learn where their lesions usually appear.

When you examine a patient who has a skin problem, try to examine all the skin of his body. Do not just examine the part of his skin he shows you.

### *Look for Signs of Itching*

The patient might tell you his skin itches. Be sure to ask him about itching if he does not mention it first.

Look for scratch marks on his skin. See if his skin has grown thick at any place where he scratches.

When people scratch, they often infect skin lesions. Look for signs of infection.

### *Look for Signs of Inflammation*

Always look for redness in and around skin lesions. See if the redness has spread from the lesion further along the skin.

Feel the temperature of the skin. Compare it to the temperature of the skin on the opposite side of the body. Decide whether the skin around the lesion is warmer or cooler than the skin on the opposite side of the body.

### *Look for Signs of Other Skin Diseases*

Sometimes, two or more skin diseases occur together. Skin lesions can become infected because of scratching, or some other kind of injury.

## 1.3 DESCRIBING SKIN LESIONS

As you do your physical examination, describe to yourself the skin lesions you see. If you can describe the different kinds of lesions, you will be able to write or report your findings more easily.

You will see six main kinds of skin lesions:

### *Macule*

A macule is usually less than 1 cm across. It is flat and usually round. The macule is often different in color from the skin surrounding it.



### *Papule*

A papule is a small lesion, like a macule, but it is raised above the surface of the skin.



### Vesicle

A vesicle is any raised skin lesion with clear fluid inside.



### Pustule

A pustule is a raised skin lesion like a vesicle.

However, the fluid inside a pustule is cloudy. This fluid is pus.

Pus is a mixture of dead microbes, dead skin cells, dead white blood cells and serum.



### Ulcer

An ulcer is a deep skin lesion. It affects both the epidermis and the dermis. It is often round, but sometimes its shape is irregular.

In the center of an ulcer, you will see pus or blood and raw tissue.



### Burrow

Little creatures that cause scabies tunnel under the skin. You can see these tunnels, or burrows, as lines on the skin. On dark skins, you may only see small, slightly raised bumps.



## 1.4 SPECIAL THINGS TO NOTE ABOUT SKIN LESIONS

As well as describing the kind of skin lesions a patient has, you must also take note of certain things about them.

### *Note the Color of the Lesions and the Skin Around Them*

Redness around a skin lesion is usually a sign of infection and inflammation.

In some skin diseases, such as ringworm and leprosy, the skin loses its natural color. A person with dark skin who has these two diseases may have white patches. The skin may also lose its natural color for other reasons which are not serious health problems.

### *Note Tenderness In or Around the Lesions*

Lesions are tender if the patient feels pain when you touch them. As you touch the lesions, ask the patient if he feels any pain. Pain is a sign of inflammation and infection.

### *Note the Skin Temperature*

Sometimes the skin near or around lesions feels warmer than the rest of the skin. This sign of inflammation or infection is caused by an increased flow of blood around the lesion.

### *Note Whether the Lesion Is Wet or Dry*

Wet skin lesions are often a sign of severe irritation or infection.

### *Note Whether the Lesion Is Hard or Soft*

When a skin lesion feels hard in the center, the lesion could be infected.

A soft skin lesion is often called fluctuant.

### *Note If the Patient Has Any Loss of Feeling*

In early leprosy, the patient loses feeling in some parts of his skin. If you touch parts of his skin, he can feel nothing.

### *Note How the Lesions are Distributed in the Skin*

Skin lesions are sometimes clearly separated from each other. This is the case in the first days of measles.

In other cases, the lesions are close to each other and join together.

*Note Whether the Skin Is Rough or Smooth*

In many skin diseases, especially when they have lasted a long time, the texture of the skin becomes rough.

*Note if the Skin Is Scaly*

Sometimes flakes or scales form on the surface of the skin. These scales peel off easily.

*Note Whether the Edges of the Lesion are Sharp*

The edges of skin lesions are often sharply separated from the rest of the skin. In ringworm, for example, the center of the lesion appears normal.

## REVIEW QUESTIONS

### Assessing Patients with Skin Problems

1. Describe the following lesions.
  - a. Ulcer
  - b. Papule
  - c. Vesicle
  - d. Macule
  - e. Pustule
  - f. Burrow
2. List directions and questions you should ask when interviewing a patient who complains of skin problems.
3. During a physical examination of the skin, you are expected to identify and record abnormal findings. Next to each category below, give an example of an abnormal finding and explain the meaning of that finding.

ABNORMALITY	MEANING
a. Temperature	
b. Color	
c. Texture	
d. Moisture	
e. Sensation	

# SKILL CHECKLIST

## Assessing Patients with Skin Problems

This checklist has two purposes.

- 1) Students should use it as a guide for checking their own skills or other students' skills.
- 2) Supervisors should use it when they evaluate how well students assess patients with skin problems.

After observing a student, enter a rating in the appropriate column.

As you assess a patient  
with skin problems,  
look for the following  
lesions:

Rating: 1 = Inadequate  
2 = Needs improvement  
3 = Satisfactory  
4 = Above average  
5 = Excellent

	YES	NO	RATING	COMMENTS
1. Macule				
2. Papule				
3. Pustule				
4. Vesicle				
5. Burrow				
6. Ulcer				

Obtain historical  
information about the  
skin problems:

1. Onset				
2. Duration				
3. Previous history				

	YES	NO	RATING	COMMENTS
4. Associated problems				
5. Allergies				
6. Previous treatment				
7. Aggravating factors				
8. Alleviating factors				
9. Other family members with same symptoms				

Examine the skin  
and comment:

1. Temperature				
2. Color				
3. Location, distribution and shape of lesion				
4. Presence or absence of inflammation				
5. Presence or absence of moisture in skin				
6. Texture of skin: rough, smooth, scaly, hard, soft				
7. Abnormal sensation associated with lesion				

## *Unit 2*

# **Skin Problems Spread by Personal Contact**

### **STUDENT GUIDE**

#### **OBJECTIVES**

1. Describe the kinds of lesions caused by:

Impetigo	Ringworm
Scabies	Tinea versicolor
Lice	

2. Describe the typical distribution of these lesions.
3. Interview and examine patients and identify skin problems.
4. Provide treatment and care for patients suffering from skin problems.
5. Instruct patients and their families how to care for and prevent skin problems, and how to prevent their spread.

#### **LEARNING ACTIVITIES**

1. Learning about skin problems through presentations by the instructor and discussions.

2. Viewing and discussing slides which show the lesions associated with these problems.

3. Practicing the use of case studies.

4. Demonstrating and practicing skills:

- Identifying problems

- Providing patient treatment and care

- Instructing patients about home care and prevention

- Applying warm and cold soaks

5. Practicing skills for one and a half days in a clinical setting.



## 2.1 IMPETIGO

Impetigo most commonly affects children. Impetigo occurs in all countries of the world. Several kinds of bacteria cause impetigo. Some of these bacteria can also cause a serious kidney disease, nephritis.

### CLINICAL PICTURE

#### a. Presenting complaint

Although impetigo can occur in adults, your patient usually will be a *child*. The child may have many sores on the *face, legs or arms*. An adult with impetigo often complains of a skin lesion which *itches*.

#### b. Medical history

The child, or the child's mother, usually will tell you that the sores started several days earlier and that they are getting worse. The child may be scratching them.

Impetigo often starts when children scratch insect bites. You will see cases of the disease more often during seasons when there are many insects.

Sometimes the mother will tell you her child has had a fever.

Often, you will find that other members of the patient's family have the same kind of sores.

#### c. Physical examination

Look for small *vesicles* on the skin and insect bites that the child has scratched. When the *vesicles* become infected, *pustules* form.

Look for lesions covered by *crusts*. When these crusts have been picked off, the lesions are filled with fluid. The lesions are painful. Check to see if the patient has a fever.

NOTE: Words printed in *bold face* type indicate symptoms and signs found in the Diagnostic Guides.

## COURSE AND COMPLICATIONS OF IMPETIGO

Nephritis is the most serious complication of impetigo. You learned about nephritis in the Genito-Urinary module.

## PATIENT CARE AND PREVENTION

### a. Warm water soaks

Instruct the patient or his mother to soak the crusts with warm water four times a day for twenty minutes each time. This will help remove the crusts and clean the skin. Warm soaks must be continued until the lesions have dried up. See Patient Care Procedures.

### b. Oral antibiotic

Give penicillin V tablets. See Patient Care Guides.

### c. Personal hygiene

Tell the patient to wash his hands often with soap and water. If the patient is a child, ask his mother to cut his nails short and keep them clean. This will help prevent infection when he scratches. Impetigo spreads easily. Tell patients and families not to touch the lesions.



## 2.2 SCABIES

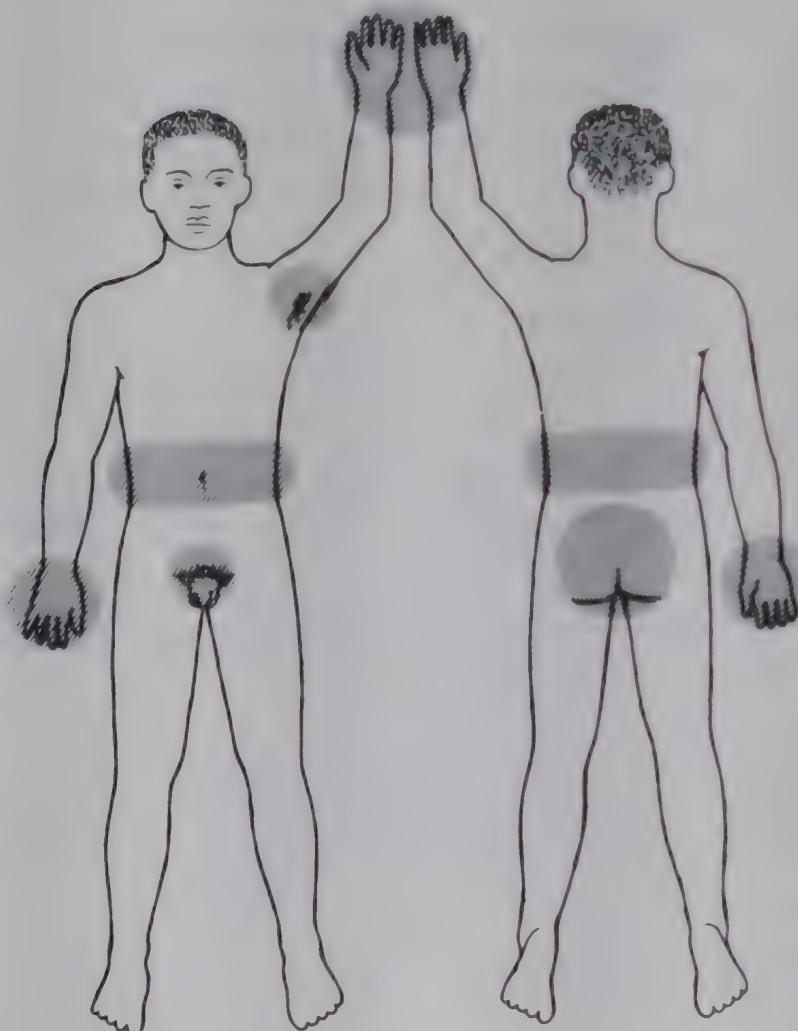
Some people call scabies "the itch." Scabies is a common skin disease. A small animal called the scabies mite causes the disease. The female mite tunnels into the skin and lays her eggs there.

Scabies spreads among people who have close contact with each other. If one person in a family gets scabies, the whole family must be treated.

### CLINICAL PICTURE

#### a. Presenting complaint

The patient usually comes to see you because of severe *itching*. This itching occurs *between the fingers*, on the *wrists*, around the *waist*, in the *armpits*, and on the *buttocks* and *genitals*.



**b. Medical history**

The *itching* is very severe. It gets worse at night.

You will often find that other members of the patient's family have scabies. Always ask about the patient's family when treating scabies.

**c. Physical examination**

Look at the skin closely. Look especially *between the fingers*, on the *wrists*, around the *waist*, in the *armpits*, and *on the buttocks* and *genitals*. You probably will see the *burrows* caused by the scabies mites. You will also see *scratch marks* because of the severe scratching.

Scabies lesions usually occur only in certain parts of the skin. For example, you will probably never see scabies on a patient's head or face, except in infants.

**COURSE AND COMPLICATIONS OF SCABIES**

If a patient is not properly treated, scabies will become chronic.

Very often, scabies lesions become infected when the patient scratches them. This can cause impetigo which covers the burrows. Then, only the location of the lesions will guide you in diagnosing scabies.

**PATIENT CARE AND PREVENTION****a. Treat the whole family**

If one person in a family has scabies, you must encourage the whole family to get treatment. Untreated people will re-infect even those you have already treated.

**b. Treat infected lesions first**

If the patient has crusty sores on his skin where scabies usually occur, treat these lesions first. Do this in the same way you would treat the lesions of impetigo.

**c. Bathing with soap and water**

When the crusty lesions have dried, instruct the patient to bathe thoroughly with soap and water.

**d. Benzyl Benzoate**

See Patient Care Guides.

e. Washing clothes and bedding

Tell the patient to wash all clothes and bedding thoroughly.

f. Tell patients and members of their families to return if the problem occurs again.

### 2.3 LICE

Lice are small animals that live on hairy parts of the skin. There are three kinds of lice:

Head lice live on the scalp and lay their eggs there

Body lice live in clothing and lay their eggs on the hair of the trunk

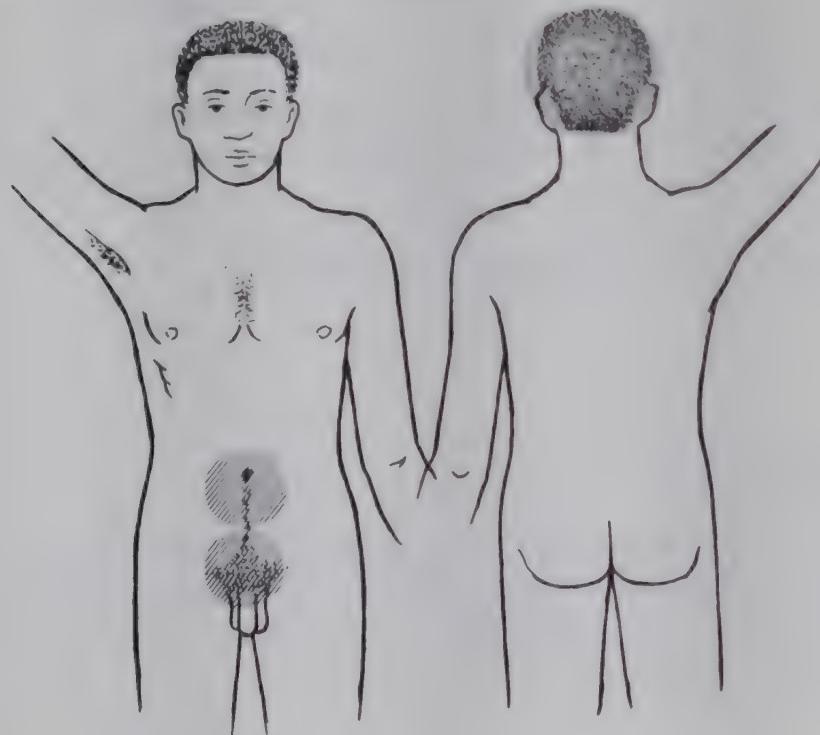
Pubic lice live in the pubic area and lay their eggs there

People get lice when they live crowded together in poor conditions of hygiene. Pubic lice are also spread by sexual contact.

#### CLINICAL PICTURE

a. Presenting complaints

The main complaint is itching. The *itching* occurs either on the *scalp*, the *trunk* or in the *pubic area*, depending on the kind of lice.



**b. Medical history**

Many members of the family might have the same symptoms.

**c. Physical examination**

Look closely at the parts of the body that *itch*. You might see small *white specks* attached near the roots of hairs. These are lice eggs. They are called “*nits*”.

Lice themselves are about 1 mm to 4 mm in length. Body lice can often be found along the seams inside the patient’s clothing.

### COURSE AND COMPLICATIONS OF LICE

Scratching can lead to infections such as impetigo.

### PATIENT CARE AND PREVENTION

**a. Treat all members of the family**

If you do not treat all members of the family, those who have been treated will get lice again.

**b. Treat the itching areas of skin with benzyl benzoate**

See Patient Care Guides.

**c. Iron clothing**

If the patient has body lice, tell him to wash and iron his clothing. Ironing will kill lice and nits.

**d. Expose clothing and bedding to sunlight**

If the patient has body lice, tell him to turn his clothes inside-out and expose them to strong sunlight. This will also help to kill lice and nits.

**e. Treat patient for impetigo, if it is present**

## 2.4 RINGWORM

A fungus causes ringworm. Ringworm spreads easily from person to person. It can also be caught from animals in the house. Children usually get ringworm on the scalp. Other forms of ringworm occur on the trunk, in the groin and armpits, and under the breasts.

## CLINICAL PICTURE

### a. Presenting complaints

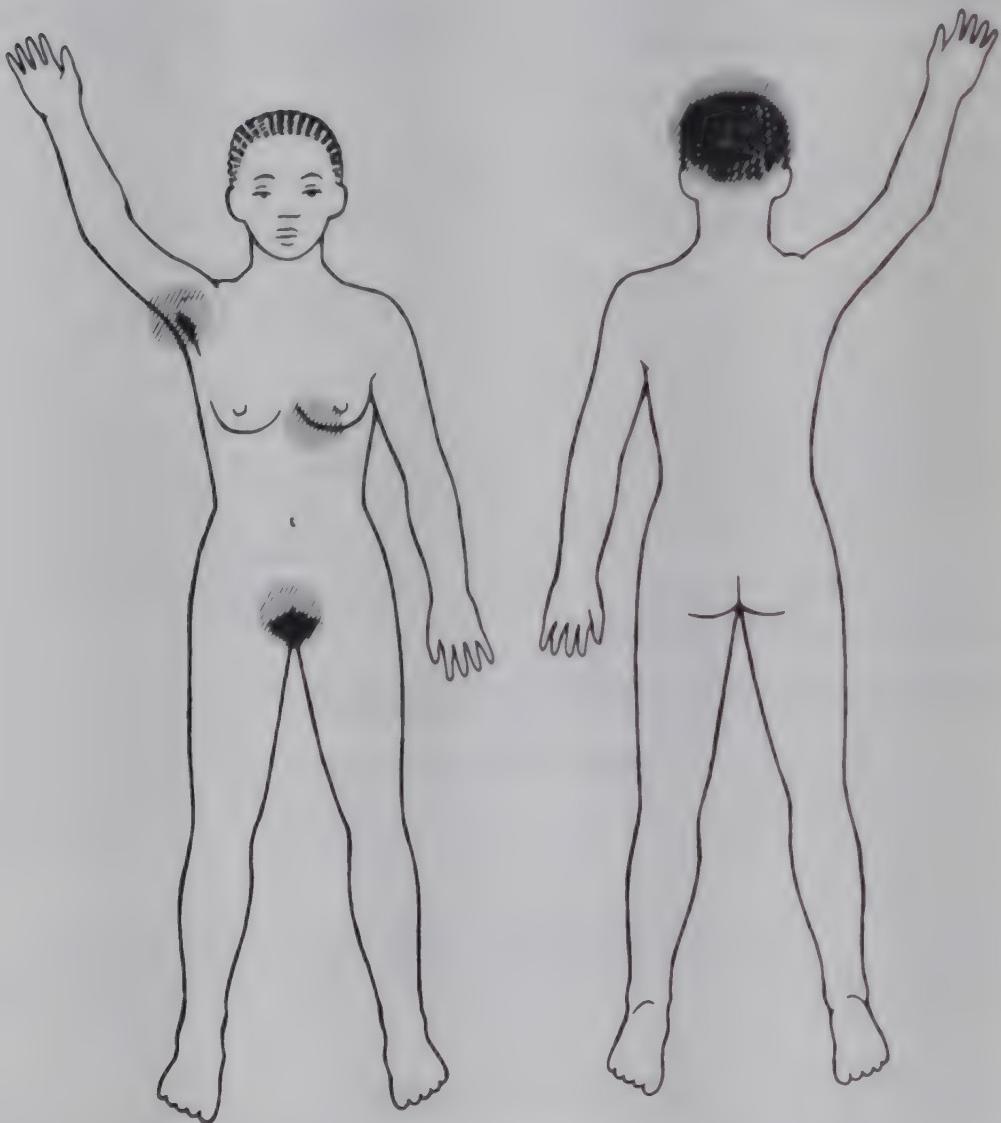
When ringworm infects the scalp, it may cause no symptoms at all. Usually, however, the patient complains of one or more very itchy patches of skin.

### b. Medical history

The patient will tell you that the lesions began as small patches. These patches gradually get larger over several weeks.

### c. Physical examination

On the scalp, the lesions of ringworm are usually *round, gray patches*. In these areas, the hairs are broken off. The *patches* appear *bald*.



Ringworm lesions usually appear on parts of the body not covered by clothes. The lesions are *red* and *round*. The edges of the lesions are sharp. They are made up of very small *vesicles*. As the lesions get larger, the skin in the center flakes off and appears normal again. This is called *central clearing*. Central clearing is an important sign that will help you make your diagnosis.

On the scalp and the body, the lesions are often *scaly around the edges*. In the groin and armpits and under the breasts, where the skin is moist, ringworm lesions become wet, very *itchy* and *red*. The edges of the lesions are sharp and scaly. The lesions are flat. Sometimes, you will see small *vesicles* along the edges of the lesions. Sometimes you will see *vesicles* further away from the lesions and separated from them by healthy skin.

#### COURSE AND COMPLICATIONS OF RINGWORM

Ringworm has no important complications. You can usually control the disease with special ointments. If ointments do not work, medicines taken by mouth will control it.

#### PATIENT CARE

##### a. Whitfield's ointment

If the lesions are on the scalp or trunk, apply Whitfield's ointment twice a day for six weeks.

##### b. Cold, wet soaks

Apply cold, wet soaks if the lesions are in the groin or armpits or beneath the breasts, and are wet and red. The cold, wet soaks should be applied for twenty minutes four times a day. Stop them when the skin dries out and is less inflamed. Then apply Whitfield's ointment, as above.

##### c. Keep the skin as clean and dry as possible

Advise the patient to bathe frequently and to use talcum powder after bathing.

##### d. Griseofulvin

Use this only if the ringworm lesions do not clear up after six weeks with Whitfield's ointment, or if they get worse. See Patient Care Guides.

##### e. Tell patients that ringworm spreads easily

They must avoid close contact with persons who have the disease.

## 2.5 TINEA VERSICOLOR

This common disease affects only the top layer of the skin. Many adults have tinea versicolor without knowing about it, because the lesions cause no problems. Tinea versicolor is included in this module because it is so common. You need to be able to recognize it. Tinea versicolor is not common in young children.

### CLINICAL PICTURE

#### a. Presenting complaints

A patient with this problem often does not know he has it. He might come to you, however, complaining of a *light-colored* patch of skin. Sometimes the skin *itches*. The patient may be concerned because he thinks his skin is changing color.

#### b. Medical history

The patient might tell you that the problem gets worse or better depending on the season. The patient may have had the lesions for many years.

#### c. Physical examination

The lesions of tinea versicolor appear mostly on the *chest, back* and *upper arms*. These lesions are small, round, *scaly macules*. They are usually *light in color* but can be brown or red.

### COURSE AND COMPLICATIONS OF TINEA VERSICOLOR

There are no complications of tinea versicolor. These lesions never become infected. The only reason you will treat the disease is because the patient worries about the change in the color of his skin.

### PATIENT CARE

Use selenium sulfide lotion. See Patient Care Guides.

## **REVIEW QUESTIONS**

### **Skin Problems Spread by Personal Contact**

1. Impetigo starts with small vesicles. Describe what happens to the lesions if no treatment is given.
2. What advice would you give to a mother whose child has impetigo?
3. If one person in a family has scabies, what advice and instructions would you give to the family?
4. If a person has scabies, on what parts of his body would you expect to find lesions?
5. Why do scabies lesions often become infected?
6. Why would you examine a patient's whole family if the patient has lice?

7. How would you treat a patient with lice?
8. Describe the lesions of ringworm and the usual symptoms of this disease.
9. How would you treat ringworm of the scalp?
10. What is the treatment of tinea versicolor?

## REVIEW EXERCISE

Fill in the following chart without looking at your text. Compare your answers with the text when you are finished.

PROBLEM	CAUSE	LOCATION	LESIONS
1. Scabies			
2. Lice			
3. Ringworm			
4. Impetigo			
5. Tinea Versicolor			

## REVIEW EXERCISE

---

### *Case Study #47*

---

Name of Patient: Sanford, Carol

Sex: Female

Date of Birth: 10 April 1972

Date of Visit: 11 October 1980

Urine: Normal

Vital Signs: Temperature 37°C

Pulse 90

Respirations 24

Weight 24.3 kg

Medical History: The mother complains that her daughter has a "rash which she scratches all the time."

The rash started ten days ago. At first it was in the armpits. Then it appeared between the fingers and toes. It has now spread to the trunk and between the buttocks. The child sleeps alone. Nobody else in the family has the same complaint.

Past medical history: The child has had chicken-pox and measles. She has a normal bowel movement every day and urinates normally.

Physical Examination: The child does not look ill. She is lively and cooperative. Her mucous membranes are pink, her tongue clean. Her tonsils are normal. Chest: percussion note and breath sounds are normal. Heart: normal. Abdomen: normal.

Study the information given above. Then answer these questions.

1. What is the diagnosis?
2. What information in the case study was most useful in making that diagnosis?

3. Was any information missing from the case study that would have helped you make the diagnosis?
4. What treatment would you give this patient?
5. What advice would you give the mother of the child?

## REVIEW EXERCISE

---

### *Case Study #57*

---

Name of Patient: Williams, Joyce

Sex: Female

Date of Birth: 1 December 1976

Date of Visit: 3 October 1980

Urine: Normal

Vital Signs: Temperature 37°C

Pulse 92

Respiration 24

Weight 16.2 kg

Medical History: The child was brought to the clinic because she has "a rash which is spreading." The rash started a week ago when red spots appeared on her face. Soon after, the spots changed into yellow vesicles. These vesicles then burst. A yellow fluid came out of them. The fluid dried and formed crusts.

The child now has spots on her legs.

Past medical history: The child has had occasional colds. She had diarrhea and vomiting at the age of three.

Physical Examination: The child does not look ill. She looks well-nourished and good-tempered. Her mucous membranes are pink. Her tongue is clean and moist. Her tonsils are normal. Lymph glands are normal. Her neck is normal. Her chest is normal. Her heart is normal. Her abdomen is normal.

She has yellow, crusty lesions with red edges on both cheeks and the chin. She has the same kinds of lesions on both legs.

Study the information given above. Then answer these questions.

1. What is the diagnosis?

2. What information was most help to you when you made your diagnosis?
3. Was any information missing from the case study that would have helped you make the diagnosis?
4. What treatment would you give this patient?
5. What advice would you give the patient and her family?

## REVIEW EXERCISE

### Case Study #58

Name of Patient: Smith, Donald

Sex: Male

Date of Birth: 7 October 1948

Date of Visit: 4 February 1980

Urine: Normal

Vital Signs: Temperature 36.8°C

Pulse 72

Respiration 15

Weight 58.5 kg

Blood Pressure 130/80

Medical History: The patient complains of "itchy rash in the groin." This has troubled him for some weeks.

Past medical history: Nothing special to note. Family history: Father died of "high blood pressure." His mother is alive and well. He does not know anything about the health of grandparents, aunts or uncles. All his brothers and sisters are alive and well.

Physical Examination: This man looks healthy and muscular. His mucous membranes are pink. His tongue is clean. His tonsils are normal. Lymph glands are normal. His neck is normal. His heart is normal. His chest is normal. His abdomen is normal.

He has large circular lesions on both thighs, the lower abdomen and in the groin. The lesions have irregular, reddish edges. The skin in the center of the lesions appears normal. There are scratch marks in and around the lesions.

Study the information given above. Then answer these questions.

1. What is the diagnosis?

2. What information in the case study was most helpful to you when you made your diagnosis?
3. Was any information missing from the case study that would have helped you make the diagnosis?
4. What treatment would you give this patient?
5. What advice would you give this patient and his family?

# SKILL CHECKLIST

## Using Soaks to Treat Skin Lesions

This checklist has two purposes.

- 1) Students should use it as a guide for checking their own skills or other students' skills.
- 2) Supervisors should use it when they evaluate how well students assess patients with skin problems.

After observing a student, enter a rating in the appropriate column.

Rating: 1 = Inadequate  
2 = Needs improvement  
3 = Satisfactory  
4 = Above average  
5 = Excellent

When you apply soaks to  
skin lesions:

YES    NO    RATING    COMMENTS

1. Decide which type of soak is best for the lesion to be treated				
2. Prepare the water or salt solution				
3. Explain to the patient what you are going to do				
4. Apply soaks to the lesion for twenty minutes several times a day				
5. Instruct the patient how to prepare and apply soaks at home				

## SKILL CHECKLIST

### Patient Advice – Scabies

This checklist has two purposes.

- 1) Students should use it as a guide for checking their own skills or other students' skills.
- 2) Supervisors should use it when they evaluate how well students assess patients with skin problems.

After observing a student, enter a rating in the appropriate column.

Rating: 1 = Inadequate  
2 = Needs improvement  
3 = Satisfactory  
4 = Above average  
5 = Excellent

When giving patients advice  
about scabies:

	YES	NO	RATING	COMMENTS
1. Explain why all members of the family require treatment				
2. Determine the number of people requiring treatment				
3. Check for impetigo				
4. If crust is present, instruct adult in proper care				
5. Instruct family members to bathe carefully before applying medicine				

	YES	NO	RATING	COMMENTS
6. Instruct family members to apply lotion to the entire body				
7. Instruct family not to bathe until the third day				
8. Request a family member to repeat directions to insure understanding				
9. Speak slowly and clearly and communicate effectively				

## *Unit 3*

# **Care and Prevention of Skin Problems by Patients and Community**

### **STUDENT GUIDE**

#### **OBJECTIVES**

1. Identify the main health messages to be presented to members of the community.
2. Outline a presentation that will include these health messages.
3. Develop a health presentation based upon these messages.
4. Give presentations to patients and groups of people.

#### **LEARNING ACTIVITIES**

1. The instructor will give a demonstration of a community education presentation.
2. The instructor will lead discussion of community education methods.
3. Students will receive instruction and practice:

Identifying simple messages  
Planning presentations  
Giving presentations

### 3.1 TEACHING THE CARE AND PREVENTION OF SKIN PROBLEMS TO PATIENTS AND PEOPLE IN THE COMMUNITY

All the skin problems that you have studied so far are spread by personal contact. One way of stopping the spread of these problems is by discussing them with people.

During your discussions with people, you will find out what they already know about these problems. Then you can add to their knowledge by telling them what you know.

When you survey a community, you will learn which are the most common skin problems there. You should talk to people especially about these problems. Once you know which problems are most common, you can decide what are the most important things people need to know about them.

Before you make a presentation to people in the community, you first need to know what you want to share with them. These are what we call objectives. Then you must find good ways of passing on the information to the people. These we call methods. Finally, you must find out how much of the information people understood. This we call evaluation. You can do this either by talking to people or by observing what they actually do about skin problems.

Here is an example of how you can organize your presentation on scabies. You should develop similar presentations on other skin problems when you need to share information with the community.

#### COMMUNITY EDUCATION OUTLINE

##### a. Subject

Preventing the spread of the scabies itch in the community.

##### b. Objectives

After this presentation, people in the community will:

Recognize how good personal hygiene can help prevent the spread of the scabies itch

Recognize the early signs and symptoms of the scabies itch

Carry out simple tasks to prevent the spread of the scabies itch. These include washing clothes and exposing clothes to sunlight

### c. Methods

First discuss the scabies itch with people to find out what they know about scabies. Also, you will find out if people can describe the signs and symptoms of the scabies itch.

Then make a presentation on the scabies itch using drawings to share ideas on:

How the scabies itch starts

How to stop the spread of the scabies itch to other members of the family or community

Why it is important that the whole family get treatment for the scabies itch

### d. Evaluation

Question members of the community to see how much about scabies they have learned and remember.

On future visits to the community, see if people are doing the simple tasks to stop the spread of the scabies itch.

## 3.2 SAMPLE COMMUNITY EDUCATION PRESENTATION

The first step in preparing a community education presentation is to decide exactly what information is important to share with people in the community.

When teaching people about scabies, for example, you must decide whether they need to know what the scabies mite looks like, or whether it is more important to teach them how to care for and prevent scabies.

Using the example of scabies again, would you teach people how to take a medical history in your presentation? Obviously not. What they want to know is how to take care of scabies and how to prevent its spread from one person to another.

The second step in making your community education presentation is to develop simple messages that you can share with people. If you were planning a presentation on scabies, for example, some of your messages might be:

“Scabies can spread from one person to another”

“Scabies makes people itch”

“The itching is usually between the fingers, on the wrists, around the waist, on the buttocks, on the genitals or in the armpits”

“When people scratch, they can infect the scabies lesions more”

“If one person has scabies, his entire family needs treatment”

“A health worker can supply lotion for scabies, but he cannot prevent it”

Once you have developed these messages, it is time to organize them into a presentation. Before you make the presentation, discuss the scabies itch with people in the group and find out what they know about it. Following is a sample presentation built from the simple messages.

## YOU CAN STOP THE SPREAD OF THE ITCH

1. What is the man doing in this picture?

He is scratching. He has an itch.

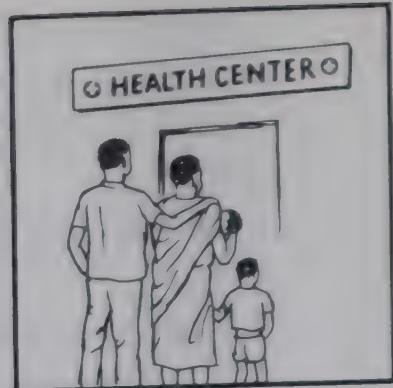
Do any of you have an itch? Have any of you had an itch? What does it feel like? Is it common in your family or in your community? How does the itch start?



2. Sometimes itching is caused by little animals that settle on your body. When one person in the family gets the itch, then other family members can also get the itch.



3. This is why it is important for the whole family to go for treatment when one person in the family gets the itch.



4. When any of you or your family comes to the health center with the itch, I can give some medicine for treatment. But only you can stop the itch from spreading to other members of your family or the community.



5. How can you do this?

Look at this picture, what is the man doing?

He is bathing with soap and water.

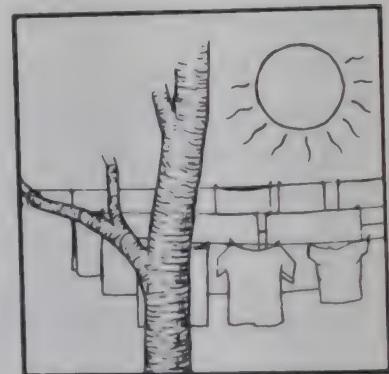
Yes, bathing regularly with soap and water helps to prevent you from getting the itch.



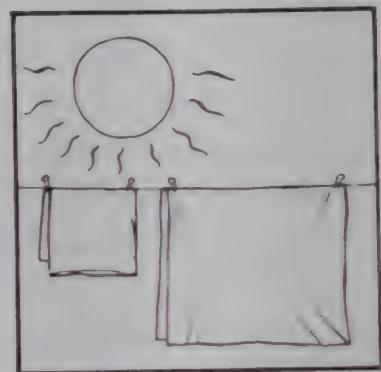
6. Another step you can take is to wash all the family clothes when someone gets the itch. This makes the clothes clean and stops the itch spreading to other people.



7. It is also important to dry the clothes in bright sunlight. This kills all the little animals that cause the itch.



8. You should also wash all the bedding in the house and put it out in bright sunlight. This also helps to stop the itch from spreading.



9. Remember, when you have the itch, you can spread it to other persons in your family and the community.



10. You can save your family from getting the itch by bathing regularly, washing your clothes and bedding and drying them in bright sunshine.



11. If you have the itch, come to the health center to see me and I can give you the medicine that you and your family may need. I can help to treat the itch, but only you can stop it from spreading in the community. Can you tell me what you should do to prevent the itch from spreading in the family and the community?



This is an example of a presentation using pictures. The pictures here are made small to fit in your module. The actual size of the pictures you use should be bigger so the whole group can see them.

Sometimes you may not have the right pictures. Then you have to use another method like role playing, demonstration, or discussion. You should think of methods that will help you share ideas with the community. Always choose methods that help people in the community understand what you have to say. At the same time, they must share ideas with you on the health problem. In this way you are able to share concerns with each other.

You have seen that you must first know what information you want to share with people. You must then find out how much people already know. Third, you must find a good way of passing on the information to them. Finally, you must find out how much of what you discussed they understood. You can do this either by talking with them or by observing what they actually do about the skin problem. If people begin to care for skin problems correctly and take the right steps to prevent them, you have done your job well.

# SKILL CHECKLIST

## Presenting Health Messages to Groups

This checklist has two purposes.

1) Students should use it as a guide for checking their own skills or other students' skills.

2) Supervisors should use it when they evaluate how well students assess patients with skin problems.

After observing a student, enter a rating in the appropriate column.

Rating: 1 = Inadequate  
2 = Needs improvement  
3 = Satisfactory  
4 = Above average  
5 = Excellent

During your presentation,  
you must:

YES    NO    RATING    COMMENTS

1. Tell the group what your subject for discussion is and why it is important				
2. Find out what people in the group know about the subject to be discussed				
3. Give your presentation in simple, clear language				
4. Present your message in more than one way				
5. Include all members of the group in the discussion				
6. Find out if people understood the message				
7. Make people in the group comfortable and relaxed				

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## *Unit 4*

# **Skin Problems not Usually Spread by Personal Contact**

### **STUDENT GUIDE**

#### **OBJECTIVES**

1. Describe the clinical picture and typical lesions in these skin problems:

Cellulitis	Tropical ulcer
Boils and abscesses	Herpes simplex
2. Interview and examine patients with these skin problems.
3. Provide treatment and care for patients suffering from these skin problems using special procedures that include dressing, opening, and drainage of boils and abscesses.
4. Teach patients and their families how to care for these skin problems.

#### **LEARNING ACTIVITIES**

1. The instructor will give presentations and lead discussions.
2. Students will view and discuss a slide presentation on skin problems not usually spread by personal contact.
3. In a clinical setting, students will receive instruction and practice in:
  - Identifying problems
  - Providing patient treatment and care
  - Instructing patients about home care
  - Applying dressings
  - Opening and draining boils and abscesses
4. Students will receive one and a half days of clinical practice.

## 4.1 CELLULITIS

Cellulitis occurs when bacteria infect the deep part of the skin. The problem often starts with a cut or other injury to the skin.

Cellulitis is not easily spread from one person to another. Usually it is easily cured by antibiotics.

### CLINICAL PICTURE

#### a. Presenting complaints

Usually, the patient will come to see you because part of his skin is *swollen* and *painful*.

#### b. Medical history

The patient will usually tell you that he *cut* or *injured* himself and that his skin has become *swollen* and *painful* since then. Sometimes there is no history of a cut or injury.

#### c. Physical examination

The patient often has a *fever* and *chills*. The infected part is *swollen*, *red*, *warm* and tender. It feels *firm* when you touch it. Lymph glands near the infected part are usually *swollen* and tender.

### COMPLICATIONS OF CELLULITIS

Cellulitis can spread rapidly to other parts of the body. It can cause severe illness and even death. Cellulitis is especially dangerous if it occurs on the face.

### PATIENT CARE

Pus does not collect in cellulitis, so you must not cut into the infected part.

#### a. Give penicillin V tablets

See Patient Care Guides.

#### b. Apply warm soaks

Instruct the patient to apply a clean, warm, wet cloth to the

infected skin, for at least twenty minutes, four times a day. See Patient Care Procedures.

- c. Aspirin helps to relieve pain and control fever  
See Patient Care Guides.
- d. Refer the patient to a hospital if there is no improvement after forty-eight hours

## 4.2 BOILS AND ABSCESES

Boils are bacterial infections of the skin. They usually start in hair follicles or in parts of the skin that are constantly rubbed. An abscess is caused by bacteria which destroy tissue. A cavity forms. It is filled with pus.

### CLINICAL PICTURE

#### a. Presenting complaints

The patient complains of a "*painful* lump" in the skin.

#### b. Medical history

The patient will tell you that, at first, he had a small, *red*, slightly *painful* lump in the skin. This grew rapidly larger.

#### c. Physical examination

The lesion will be firm in the early stages and raised above the surface of the skin. The skin around the lesion will be *red* and *warm*. As the boil develops it becomes soft, or *fluctuant*. A yellow point will appear in the middle of the lesion. This means that the lesion contains pus. Lymph glands near the lesion are usually *swollen* and tender.

An abscess is usually larger than a boil. The area over the abscess is *painful* and *fluctuant*. The *skin is swollen, red, and warm*. *Lymph glands* near the boil are *swollen*.

### COMPLICATIONS OF BOILS AND ABSCESES

If not properly treated, the infection from a boil can spread to the bones, kidneys or brain.

Certain people frequently get boils. In older people, this could be a sign of diabetes.

## PATIENT CARE

### a. Check the urine

Boils can be a sign of diabetes. Check the urine to see if it contains any sugar. If it does, refer the patient to a hospital for tests.

### b. Apply warm soaks

If the boil is hard, instruct the patient to soak the infected part with clean, warm water. Tell him to do this for twenty minutes, four times a day until it becomes soft and can be cut open.

### c. Wash lesion with soap and water

### d. Open the boil

Open the boil only when a yellow head appears. A yellow head shows that the boil is full of pus. Cut carefully into the boil with a sterile knife. Then gently ease the pus out by pulling the skin on either side of the lesion.



### e. Wash the lesion with soap and water

### f. Apply a dressing

Apply a sterile dressing to the boil. Change the dressing twice a day until no more pus comes out.

### g. Give penicillin V tablets if the boil is on the face, or if the patient has a fever, or if the infection is very large

See Patient Care Guides.

### 4.3 TROPICAL ULCERS

Tropical ulcers are common in hot countries. Most often, they occur in people who are malnourished and who live in overcrowded, unhygienic homes.

#### CLINICAL PICTURE

##### a. Presenting complaints

If the patient comes to see you before the ulcer develops, he might complain of a vesicle on the *lower leg or foot*. Or he might complain of an “*open sore*.”



##### b. Medical history

The patient will often tell you that the ulcer started with a small injury. Then a vesicle formed. The vesicle changed into a larger, painful ulcer. The ulcer smells bad.

##### c. Physical examination

The ulcer has *raised edges*. The surrounding skin is *swollen*. Sometimes the ulcer is shallow. Sometimes it is deep. Deep ulcers can eat away muscles or even bone.

If the ulcer is chronic, its edges are thin. The skin around it looks unhealthy.

#### COURSE AND COMPLICATIONS OF TROPICAL ULCERS

If tropical ulcers are not treated quickly and properly, they can eat away skin, muscle and bone.

#### PATIENT CARE

##### a. The patient should get complete rest

The patient should stay in bed until the ulcer begins to heal and it is covered by healthy tissue.

b. Elevate the leg

Raise the leg slightly above the level of the body while in bed. If sitting, raise the leg as high as possible. Raising the leg helps prevent edema, or swelling.

c. Apply warm, salt soaks

The ulcer must be soaked with warm salt water for twenty minutes, four times a day. Make the salt solution by adding one teaspoonful of salt to one liter of boiled water.

d. Swab with hydrogen peroxide

After the ulcer has been soaked, swab it with hydrogen peroxide.

e. Between soaks, cover the ulcer with clean gauze

f. Give penicillin and streptomycin

See Patient Care Guides.

g. Apply a petroleum jelly dressing

When the ulcer begins to heal, dress it with petroleum jelly. Cover it with gauze. Wrap it in an elastic bandage.

This dressing should be left in place for ten days at a time, unless the ulcer begins to drain again.

h. Refer the patient to a hospital if the ulcer does not heal in five weeks

i. Give advice to patients and families

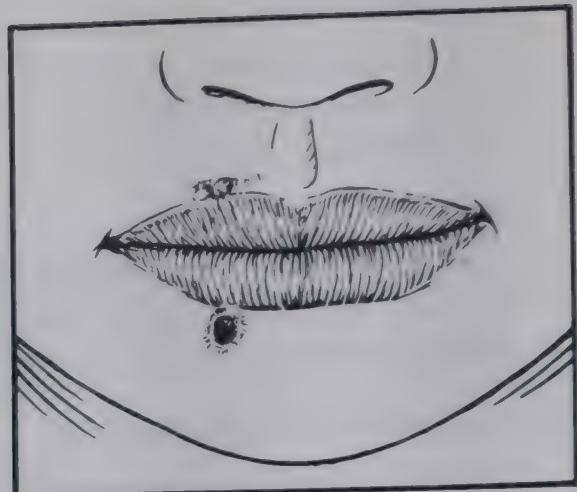
Explain to the patient that he should try to eat more body-building foods, if possible.

Explain to the patient's family members that they must get treatment as soon as they cut or injure themselves.



#### 4.4 HERPES SIMPLEX

Herpes simplex is caused by a virus. Almost everybody gets this infection in early childhood. Some people get it over and over again, especially when they are upset or ill. Sometimes herpes simplex appears with sunburn or a small injury.



##### CLINICAL PICTURE

###### a. Presenting complaints

The patient complains of a small, *painful* sore, usually on or near the *mouth, nose, or genitals*.

###### b. Medical history

The patient will probably tell you that he has recently been ill with a fever. Or he might tell you that he has had digestive problems or has had a small injury. Perhaps he has been emotionally upset.

The patient will nearly always tell you that he has had the same kind of sore, in the same place, before. He will tell you that the sore started with a feeling of burning or stinging where the lesion formed.

###### c. Physical examination

The lesion is formed by a group of small *vesicles*. The skin under the vesicles is *red*. The vesicles burst and form crusts. The lesions often become infected with other microbes. Lymph glands near the lesion may be swollen and tender.

#### COURSE AND COMPLICATIONS OF HERPES SIMPLEX

Usually the lesions last for a week or two. Then they disappear by themselves. The most serious complication is that the infection can spread to the eye. A lesion might form on the cornea.

#### PATIENT CARE

There is no good treatment for herpes simplex. If the lesions become infected with other microbes, apply warm soaks.

## REVIEW QUESTIONS

### **Skin Problems Not Usually Spread by Personal Contact**

1. What would make you decide to open a boil or abscess by cutting into it with a sterile knife?
  
  
  
  
2. What is the indication for putting a patient with boils on a course of penicillin?
  
  
  
  
3. If a patient keeps getting boils, what disease might he have?
  
  
  
  
4. What does the infected area of skin look like when a patient has cellulitis?
  
  
  
  
5. Which of these would you do to treat cellulitis?  
 a. Give penicillin  
 b. Apply warm soaks four times a day  
 c. Refer the patient to hospital if no improvement is seen after two days  
 d. Open the infected part by cutting into it  
 e. Give aspirin for pain and fever
  
  
  
  
6. A tropical ulcer usually begins with a small cut or insect bite. Describe how this develops into an ulcer.

7. Describe how you would treat this patient.

The patient has had an ulcer on his leg for ten days. It is 4 cm across. The skin around the ulcer is inflamed. The ulcer smells bad. Pus drains from it. The patient complains of pain around the ulcer.

8. How do you decide if a patient with tropical ulcer requires referral? Select the correct answer.

- a. When the patient has a fever of 40°C.
- b. If the ulcer does not respond to treatment after four to six weeks.
- c. If the ulcer shows signs of infection.

9. As well as soaking and dressing a tropical ulcer, what else must be done

- a. by the health worker?

- b. by the patient?

10. Where would you expect to see the lesions of herpes simplex? What would these lesions look like?

11. How do the lesions of herpes simplex start and develop?

12. What is one possible serious complication of herpes simplex? How would you deal with it?

## REVIEW EXERCISE

Fill in the following chart without looking at your text. Compare your answers with the text when you are finished.

PROBLEM	CAUSE	LOCATION	LESIONS
1. Cellulitis			
2. Boils and Abscesses			
3. Tropical Ulcer			
4. Herpes Simplex			

# SKILL CHECKLIST

## Opening and Draining Boils and Abscesses

This checklist has two purposes.

- 1) Students should use it as a guide for checking their own skills or other students' skills.
- 2) Supervisors should use it when they evaluate how well students assess patients with skin problems.

After observing a student, enter a rating in the appropriate column.

Rating: 1 = Inadequate  
2 = Needs improvement  
3 = Satisfactory  
4 = Above average  
5 = Excellent

When opening and draining  
boils and abscesses, you  
must:

YES    NO    RATING    COMMENTS

1. Collect equipment and materials				
2. Wash your hands with soap and water				
3. Explain to the patient what you are going to do				
4. Clean the skin around the lesion with soap and water				
5. Cut directly down into the boil with a sterile knife				
6. Make the cut long enough				
7. Release pus from the boil by pulling on both sides of the lesion				

YES NO RATING COMMENTS

8. Clean around the boil with soap and water				
9. Apply a sterile dressing to the boil				
10. Advise and instruct the patient about warm soaks and return- ing after two days				

## *Unit 5*

# **Skin Problems Never Spread by Personal Contact**

### **STUDENT GUIDE**

#### **OBJECTIVES**

1. Describe the clinical picture that occurs in:

Eczema	Contact dermatitis
Onchocerciasis	Reactions to drugs
2. Interview and examine patients and identify these problems.
3. Provide treatment and care for patients suffering from these skin problems.
4. Instruct patients and members of their families in the home care of these problems.

#### **LEARNING ACTIVITIES**

1. The instructor will give presentations and lead discussions.
2. Students will view and discuss a slide presentation on skin problems never spread by personal contact.
3. Students will practice using case studies.
4. In a clinical setting, students will receive instruction and practice in:
  - Identifying skin problems never spread by personal contact
  - Providing patient care
  - Instructing patients about home care
5. Students will have one and a half days of clinical practice.

## 5.1 ECZEMA

Eczema occurs in families in which there are persons who get allergies. Eczema is not infectious. It often starts in early childhood. In young children, it appears mostly on the face. In older children and adults, it occurs mostly on other parts of the body.

### CLINICAL PICTURE

#### a. Presenting complaints

A young child is usually brought to see you because of a red, *wet, itching* rash on the *cheeks* or forehead. Older children and adults usually complain of lesions on the body that are *dry* and *itching*.

#### b. Medical history

The lesions often disappear and return again. The disease can become chronic, lasting for many years. The disease can stop in children, however, before they reach the age of five years.

#### c. Physical examination

In children, the rash is red and *wet*. The lesions are small vesicles. These burst and form *crusts*. The lesions often become infected because the child scratches. In older children and adults, the lesions are usually *dry*. The lesions are commonly found in the *bends* of the *elbows* or *knees*. If the lesions have been present a long time, the skin is thickened because of constant scratching. In this case, the skin will feel rough. If the lesions have become infected, they might ooze fluid and become *crusty*.

### COURSE AND COMPLICATIONS OF ECZEMA

Eczema often disappears when children reach four or five years of age. Children who have had eczema, however, often get another type of allergy later on. Many of them suffer from asthma.

The main complication of eczema is infection of the skin. The constant itching makes patients bad-tempered.

### PATIENT CARE

#### a. Apply cold soaks

If the lesions are wet and red, apply cold soaks four times a day until the lesions dry up.

b. Apply petrolatum

If the skin is rough and dry, apply petrolatum ointment three times a day. This helps to prevent the skin from becoming too dry.

c. Apply 1% hydrocortisone ointment to the lesions twice a day

## 5.2 ONCHOCERCIASIS

This disease is caused by a very small worm. The worm is carried by a kind of fly called the black fly. When this fly gets on a person's skin or in his eye, the worm enters his body.

Onchocerciasis is common in Central Africa and South America. It causes many people to go blind in these parts of the world.

### CLINICAL PICTURE

a. Presenting complaints

Young children often complain first of a rash that *itches* very much. The rash often occurs only on *one quarter of the body*.

Older persons who have recently arrived in the country where onchocerciasis is common, often have the same complaint.

b. Medical history

The patient will tell you he has had a red, *itching* rash. The rash may have lasted for several months.

c. Physical examination

The rash is often found only in *one quarter of the body*, or *across the back*. The lesions are small, round *papules*. In patients who have had the disease for some time, the *skin is thickened*. The lymph glands in the groin are swollen. Later still, the skin becomes thin and is scarred. *Lumps* develop under the skin. At this stage of the disease, *itching is absent*.

### COURSE AND COMPLICATIONS OF ONCHOCERCIASIS

The worst complication of this disease is *blindness*. The worms can infect the conjunctivae, the iris, the cornea, the retina or the optic nerve.

## PATIENT CARE AND PREVENTION

These instructions are for severe infections.

a. Begin giving betamethasone

Begin giving betamethasone one day before giving diethylcarbamazine. See Patient Care Guides.

b. Give diethylcarbamazine

This drug kills young parasites that cause the infection. Their dead bodies cause severe reactions. The skin itches, swells and peels in these reactions. Betamethasone helps to reduce reactions. See Patient Care Guides.

c. Give chlorpheniramine

This drug helps to reduce the itching and swelling of the skin. See Patient Care Guides.

d. Refer the patient

If the patient develops eye problems, send him to a hospital.

e. Help the community prevent the disease

You can help prevent onchocerciasis by controlling the black fly and by finding and treating people who have the disease. Often, the government has a special control program in which you can help.

## 5.3 CONTACT DERMATITIS

Certain substances that irritate the skin cause contact dermatitis. Metals, plants, chemicals and medicines can do this. The disease can be acute or chronic, depending on how long the substance has been in contact with the skin.

### CLINICAL PICTURE

a. Presenting complaints

The patient complains of a burning or *itching* rash. The rash can be on any part of the body.

### b. Medical history

Question the patient carefully about *substances with which he has been in contact*. Ask him about soaps, lotions, chemicals, oils, metals, detergents, medicines, drugs and other chemicals.

### c. Physical examination

In cases of contact dermatitis, the lesions might be macules, papules or *vesicles*. The vesicles burst to form *crusts*. The skin around the lesions is red.

Often, the lesions are infected. Infection will sometimes cause swelling.

## COURSE AND COMPLICATIONS OF CONTACT DERMATITIS

If you fail to discover the substance that is causing the dermatitis, the problems will become chronic.

## PATIENT CARE

### a. Apply cold soaks

Apply cold soaks if the skin is red, or if the lesions are wet. Apply them four times a day for twenty minutes at a time. Continue until the lesions have dried up.

### b. Advise the patient

Tell the patient to avoid contact with the substance that caused the dermatitis.

## 5.4 SKIN REACTIONS TO DRUGS

Almost any drug can cause a skin reaction. It does not matter whether the person took the medicine by mouth, had it injected, or applied it to his skin. Often, the skin reaction occurs when a person takes a drug after not having used it for a while.

## CLINICAL PICTURE

### a. Presenting complaints

The patient complains of a rash in several parts of his body. The rash usually appears suddenly. It causes severe *itching*. The patient might complain of fever, headache, and other symptoms.

**b. Medical history**

Question the patient about *medicines he has taken* in any form in the last two weeks. If he does not remember, ask if he has recently had treatment for some illness.

**c. Physical examination**

The rash will often appear all over the body. Sometimes the patient has fever. The lesions might be *papular, red* patches, peeling areas of skin, or flat, *dark* and *macular*.

**COURSE AND COMPLICATIONS OF SKIN REACTIONS**

A skin reaction is a sign that a patient is allergic to a certain drug. He must not take the drug again or a more serious allergic reaction might occur.

**PATIENT CARE****a. Stop the drug that caused the reaction****b. Increase fluids**

Tell the patient to drink a lot of water. This will help the body to get rid of the drug.

**c. Give chlorpheniramine**

If itching is severe, give chlorpheniramine. Stop giving this when the lesions disappear. See Patient Care Guides.

**d. Give epinephrine 1:1000**

Give this only if the patient finds it difficult to breathe. Repeat after fifteen minutes, if necessary. See Patient Care Guides.

**e. Apply cold soaks**

Apply these if vesicles and crusts appear.

**REVIEW QUESTIONS**  
**Skin Problems Never Spread**  
**by Personal Contact**

1. Check the descriptions that are true for eczema.
  - a. Infectious
  - b. Starts often in early childhood
  - c. Begins in old age
  - d. Not infectious
  - e. Occurs often in certain families
  - f. Children who have it often get asthma later
2. What is the typical appearance of eczema rash in young children and the usual location of these lesions?
3. What is the appearance and location of this rash in older children and adults?
4. How would you treat an adult with eczema if the lesions are dry?
5. Dermatitis is part of the clinical picture of onchocerciasis. Describe the clinical symptoms and signs associated with onchocerciasis.
6. How does the worm that causes onchocerciasis get into the human eye?

7. The drug management of onchocerciasis is diethylcarbamazine. This drug often causes reactions. Describe the steps you would take to lessen reactions to this drug.
8. What would you advise community leaders to do if there is much onchocerciasis in your village?
9. List four substances that are likely to cause contact dermatitis.
10. What changes occur in lesions in the different stages of contact dermatitis?
11. What information would help you decide that a patient has contact dermatitis and not eczema or ringworm?
12. What treatment would you give a patient who had dermatitis, if the lesions were red and wet?
13. What is the drug most commonly associated with drug reactions?
14. What is the first thing to do when you think a certain drug is causing a skin reaction?
15. What are the signs and symptoms of a skin reaction to drugs?

## REVIEW EXERCISE

Fill in the following chart without looking at your text. Compare answers with the text when you are finished.

PROBLEM	CAUSE	LOCATION	LESIONS
1. Eczema			
2. Contact Dermatitis			
3. Drug Reaction			
4. Onchocerciasis			

## REVIEW EXERCISE

---

### *Case Study #17*

---

Name of Patient: Mixed, M.

Sex: Male

Date of Birth: 10 June 1978

Date of Visit: 3 March 1980

Urine: Normal

Vital Signs: Temperature: 36.6°C

Pulse 96

Respiration 26

Weight 10.8 kg

Medical History: The child has an itchy rash on his face. The rash is spreading. The rash started as a reddish patch on which small vesicles later appeared. The child constantly scratches the rash. Otherwise he seems well. His appetite is good. He has daily bowel movements and passes urine normally. He plays normally for his age. He sleeps normally.

Past medical history: He has had no serious problems in the past.

Family history: he is the youngest of four children. His brother, who is eight years old, gets attacks of asthma. His parents are well. His grandmother has sugar in her urine. His other three grandparents are dead. Nobody knows what they died of. One of the patient's aunts has asthma.

Physical Examination: The child looks active and well nourished. His mucous membranes are pink. His tongue is clean and moist. His tonsils are normal. His lymph glands are normal. His neck, chest, heart and abdomen are all normal. There is a reddish patch on the right cheek. This patch is covered with thin white scales. There is another patch like this on the left side of his forehead. This spreads up into the scalp.

Study the information given above. Then answer these questions.

1. What is the diagnosis?
2. What information in the case study was most helpful when you made your diagnosis?
3. Was any information missing from the case study that would have helped you make the diagnosis?
4. How would you treat this patient?
5. What advice would you give the mother of the child?

## *Unit 6*

# **Providing Care for Patients with Skin Problems**

## **STUDENT GUIDE**

### **ENTRY LEVEL**

Before starting your clinical experience, you must have scored at least 80% on a test of your knowledge about skin problems. Also, you must have received at least two satisfactory ratings on how you:

Obtain a medical history of a patient's skin problem

Do the physical examination for a skin problem

Give patient education for skin problems

Present health messages about skin problems

### **OBJECTIVES**

1. Diagnose all the skin problems described in this module.
2. Properly record information about medical history, physical examination and patient care.
3. Provide correct patient care, using the treatments described in this module.
4. Advise patients about the home care and prevention of skin problems.

### **LEARNING ACTIVITIES**

You will provide patient care, under supervision, for one week in the skin clinic.

During that time, your supervisor will help you identify and treat patients with skin problems. You will be expected to use Diagnostic and Patient Care Guides. You will have the chance to practice the patient care skills that were introduced in class.

## EVALUATION Level II

When you feel that you have had enough experience, ask your supervisor to evaluate you. He will do this using the log book. The log book contains a list of the problems you will work with in the skin clinic. It also shows how many patients with skin problems you should see. As your supervisor watches you deal with a problem, he will write his rating in the log book. He will rate you in the following way for diagnosis and patient care:

- 1 = Diagnosis incorrect
- 2 = Diagnosis correct, treatment incorrect
- 3 = Diagnosis and patient care correct, no patient advice given
- 4 = Diagnosis, treatment and patient advice correct

You will be expected to get at least a 4 rating.

You will be rated in the following way for Patient Care Procedures:

- 1 = Inadequate
- 2 = Needs improvement
- 3 = Satisfactory
- 4 = Above average
- 5 = Excellent

You will be expected to get at least a satisfactory rating.

## *Unit 7*

# **Assisting Members of the Community to Care for and Prevent Skin Problems**

### **STUDENT GUIDE**

#### **ENTRY LEVEL**

Before you start your community experience, you must:

1. Score at least 80% on a test of your knowledge about skin problems.
2. Complete a week of clinical experience in the skin clinic.
3. Score 4 on diagnosis, treatment and patient advising.
4. Earn at least a Satisfactory rating on patient care skills.
5. Earn at least a Satisfactory rating on methods for teaching community health workers.
6. Earn at least a Satisfactory rating for presenting community health messages.

#### **OBJECTIVES**

1. Provide clinical services to people who suffer from skin problems.
2. Identify infectious skin problems and plan a program to prevent them occurring and spreading.
3. Advise the community about its role in preventing skin problems.
4. Identify other members of the health team who can assist in prevention.

#### **LEARNING ACTIVITIES**

Your community experience will last three months. During that time, in addition to providing clinical services, you should:

1. Survey the community to identify the most common skin problems.
2. Identify any local customs that increase or decrease the occurrence of skin problems.
3. Hold meetings with community members and obtain their help in preventive activities.
4. Prepare a community health worker to assist you in community education.

## EVALUATION

During your community experience, your supervisor will evaluate you. To do this, he will use the standards set out in the Community Experience Log Book.

**The MEDEX Primary Health Care Series**

**Common Problems  
DENTAL, EYE, EAR,  
NOSE, AND THROAT**

**Student Text**

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University of Hawaii, Honolulu, Hawaii, U.S.A.

**Library of Congress Catalog Card No. 83-80675**

**First Edition**

**Printed in U.S.A.**

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**FUNDED BY THE U. S. AGENCY FOR INTERNATIONAL DEVELOPMENT CONTRACT NO. DSPE-C-0006.** The views and interpretations expressed are those of the Health Manpower Development Staff and are not necessarily those of the United States Agency for International Development

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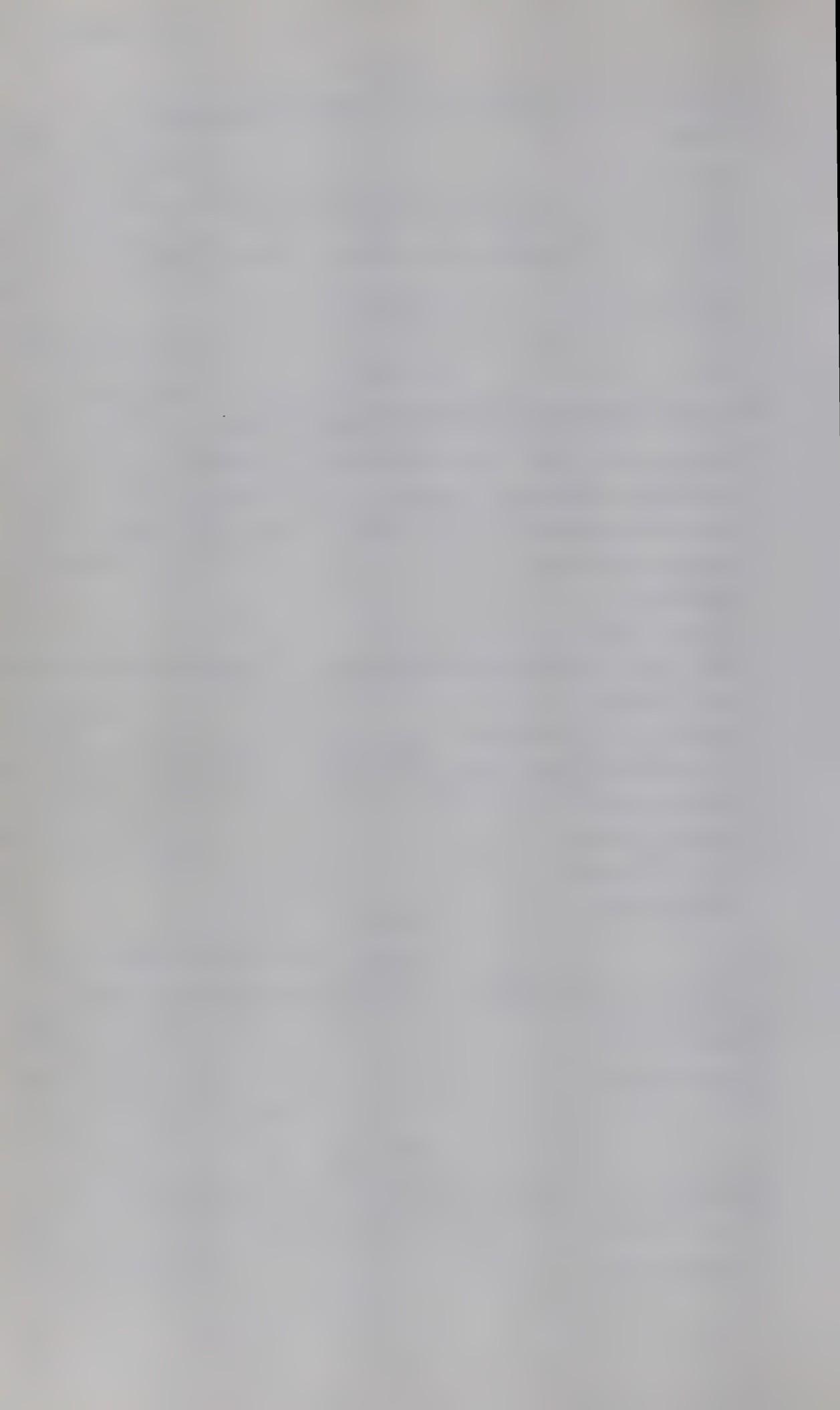
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# TASK ANALYSIS TABLE

Diagnosing, treating, and preventing dental, eye, ear, nose, and throat(DEENT) problems.

Work Requirements DUTIES	Training Requirements SKILLS	KNOWLEDGE
<p>The MLHW will:</p> <ol style="list-style-type: none"> <li>Obtain a medical history of patients presenting with a dental, eye, ear, nose or throat complaint.</li> </ol>	<p>The MLHW trainee will demonstrate his ability to:</p> <ol style="list-style-type: none"> <li>Record the patient's presenting complaint.</li> <li>Ask appropriate questions to obtain information about the presenting complaint.</li> </ol>	<p>The MLHW trainee will demonstrate his knowledge of:</p> <ol style="list-style-type: none"> <li>Questioning techniques.</li> <li>Information needed to complete a medical history: Time of day or night the illness occurs Location of problem Quality of pain Whether anyone saw a child put a foreign body in his ear, nose, or mouth Presence and color of mucous from a cough Ear discharge Hearing problems Dental hygiene and eating habits Previous treatment Whether anyone living in the patient's home has the same problem or a related problem Allergy to medications</li> </ol>
	<ol style="list-style-type: none"> <li>Record medical history in an appropriate manner.</li> </ol>	<ol style="list-style-type: none"> <li>Medical history forms in current use.</li> </ol>

Work Requirements DUTIES	Training Requirements SKILLS	KNOWLEDGE
<p>2. Conduct a physical examination of all patients presenting with a DEENT complaint.</p>	<p>2.1 Recognize and identify the signs of DEENT problems:</p> <ul style="list-style-type: none"> <li>Inflammation of the conjunctiva over the sclera</li> <li>Inflammation around the iris</li> <li>Inflammation of the conjunctiva inside the upper eyelids</li> <li>Dry eyes</li> <li>Bitot's spots</li> <li>Foreign body</li> <li>Irregularly shaped pupils</li> <li>Dilated pupils</li> <li>Constricted pupils</li> <li>Color of the teeth, gums, and mucous membranes</li> <li>Cavities of the teeth</li> <li>Color, size, shape, and location of lesions in the mouth</li> <li>Bleeding of gums at the base of the teeth</li> <li>Swelling of gums, cheek, or jaw</li> <li>Loose teeth</li> <li>Pain or discomfort when palpating the teeth or gums</li> <li>Pain when tapping a tooth</li> <li>Tender or hard mass inside the mouth</li> </ul>	<p>2.1.1 Anatomy and physiology of the teeth, eyes, ears, nose, and throat.</p> <p>2.1.2 Definition of common physical signs associated with DEENT problems.</p>

Work Requirements DUTIES	Training Requirements SKILLS	KNOWLEDGE
	<p>Tender and enlarged lymph glands in the neck</p> <p>Foul odor from the mouth</p> <p>Loss of hearing</p> <p>Color and smell of discharge from ear</p> <p>Pain when ear is pulled</p> <p>Color and consistency of discharge from the nose</p> <p>Color of mucous membranes inside the nose</p> <p>Swelling of mucous membranes inside the nose</p> <p>Severe pain in sinus above the eye or over the cheek when the sinus is tapped</p> <p>Inflamed and swollen tonsils with exudate</p> <p>Back of throat inflamed</p> <p>Swollen epiglottis</p> <p>Foreign body in the ear, nose, back of throat, or on the tonsil</p> <p>Swollen and painful lymph glands below the ear, jaw, or in front of the neck</p>	<p>2.2.1 Physical examination report forms.</p> <p>2.2 Record physical examination findings in an appropriate manner.</p>

Work Requirements DUTIES	Training Requirements SKILLS	KNOWLEDGE
<p>3. Diagnose the following DEENT problems:</p> <ul style="list-style-type: none"> <li>Cataract</li> <li>Corneal cut</li> <li>Corneal ulcer</li> <li>Conjunctivitis</li> <li>Foreign body in the eye, ear, nose or throat</li> <li>Eye emergencies</li> <li>Trachoma</li> <li>Sty</li> <li>Vitamin A deficiency</li> <li>Canker sore</li> <li>Gingivitis</li> <li>Acute ulcerative gingivitis</li> <li>Tooth decay</li> <li>Dental abscess</li> <li>Upper respiratory infection</li> <li>Acute otitis media</li> <li>Chronic otitis media</li> <li>External otitis</li> <li>Mastoiditis</li> <li>Excess wax in ear</li> <li>Acute sinusitis</li> <li>Acute bacterial tonsillitis</li> <li>Nose bleed</li> </ul>	<p>3.1 Use the Student Text and Diagnostic Guides to assist in recognizing DEENT problems.</p>	<p>3.1.1 Clinical picture, course, and complications of DEENT problems.</p>

Work Requirements DUTIES	Training Requirements SKILLS	KNOWLEDGE
<p>4. Provide treatment and care for patients suffering from dental, eye, ear, nose, and throat problems.</p>	<p>4.1 Consult the following appropriately: Common Problems- DEENT module Patient Care Procedures Patient Care Guides</p> <p>4.2 Determine treatment to be given.</p>	<p>4.1.1 Location and content of reference manuals.</p> <p>4.2.1 Treatment and prescription for each common DEENT problem.</p> <p>4.2.2 Properties of drugs and medications involved.</p> <p>4.2.3 Side effects and contraindications of drugs and medications.</p> <p>4.3 Follow Patient Care Procedures:</p> <p>Cleaning a patient's eyelids Applying eye ointment or eyedrops Removing a foreign body from the eye Removing a foreign body from the ear Removing a foreign body from the nose</p>

Work Requirements DUTIES	Training Requirements SKILLS	KNOWLEDGE
	<p>Removing a foreign body from the throat</p> <p>Removing wax from the ear</p> <p>Scaling teeth</p> <p>Giving a local dental anaesthetic</p> <p>Putting in a temporary dental filling</p> <p>Pulling out a tooth</p> <p>Cleaning pus from a draining ear</p> <p>Examining a patient for hearing loss</p> <p>Controlling a nose bleed</p> <p>5.1 Advise patients about DEENT care, medications, and prevention.</p> <p>6.1 Conduct family and community education.</p> <p>5. Provide patient education.</p> <p>6. Advise family, community, and health team members as appropriate and necessary.</p>	<p>5.1.1 Recommended DEENT care.</p> <p>5.1.2 Prescribed dosages.</p> <p>6.1.1 Community education methods and materials.</p> <p>6.2.1 Content of community health worker module.</p> <p>6.3.1 Guidelines for requesting assistance from other members of the health team.</p>

## SCHEDULE

### Common Problems - DENTAL, EYE, EAR, NOSE AND THROAT

DAY 1	DAY 2	DAY 3	DAY 4	DAY 5
<p>Introduction to Dental, Eye, Ear, Nose, and Throat module</p> <p>Identifying signs of abnormal eye conditions</p> <p>History of eye problems</p> <p>Medical history and physical examination of patients with eye problems; clinical practice</p>	<p>Care of Patients with Eye Problems</p> <p>Presentation and discussion of: conjunctivitis, sty, trachoma, eye emergencies, foreign body in eye, corneal ulcer or cut, vitamin A deficiency, cataracts</p>	<p>Community Health Message: Prevention of Blindness in the Community</p> <p>Community Health Message: Promoting Good Dental Health in the Community</p>	<p>Signs of abnormal dental and mouth conditions</p> <p>History of dental and mouth problems</p> <p>Medical history and physical examination of patients with dental and mouth problems; clinical practice</p>	<p>Care of patients with dental and mouth problems</p> <p>Presentation and discussion of: canker sores, gingivitis, acute ulcerative gingivitis, tooth decay, dental abscess</p> <p>Case study practice</p> <p>Role-play in advising patients</p>

DAY 6	DAY 7	DAY 8	DAY 9	DAY 10
Recognizing signs of abnormal ear, nose, sinus, and throat conditions  History of ear, nose, sinus, and throat problems	Care for patients with ear, nose, sinus, and throat problems  Presentation and discussion of: upper respiratory infection, acute otitis media, chronic otitis media,	Clinical Practice  Group A - Interviewing patients  Group B - Presenting health messages  Group C - Patient care	Clinical Practice  Group A - Presenting health messages  Group B - Patient care  Group C - Interviewing patients	Clinical Practice  Students complete or review practice interviewing and examining patients, providing patient care, and presenting health messages.
Medical history and physical examination of patients with ear, nose, sinus, and throat problems	Presentation and discussion of: mastoiditis, external otitis, wax in ear, acute sinusitis, acute bacterial tonsillitis, foreign body in the ear, nose, and throat, and nose bleed	Clinical Practice  Group A - Patient care  Group B - Interviewing patients  Group C - Presenting health messages	Clinical Practice  Students complete or review practice interviewing and examining patients, providing patient care, and presenting health messages.	Clinical Practice  Individual or group review of skills interviewing and examining patients, providing patient care, and presenting health messages.
	Case study practice  Role-play in advising patients			DAY 11  Posttest

# **Introduction**

Activities in this module will help you learn how to diagnose and properly care for dental, eye, ear, nose, and throat problems. These activities will take place in the classroom and in a hospital clinic or health center.

This training program can only succeed if you take an active part. Your Student's Schedule shows you when the learning activities will occur. Student Guides in front of each unit tell you more about what you will be expected to do. You must prepare for each session.

## **Before each session:**

Read the Student Text and answer the review questions that go with it

Consult the Patient Care Guides and study the drugs you will be using

Finally, prepare questions to ask your instructor about any part of the text you do not understand

Units in this module will be taught in order, from Unit 1 to Unit 8. Special arrangements will be made for Unit 9 and Unit 10 which take you into the clinic and community.

This training program will help you build your knowledge and skills. Regular evaluations allow your instructor to watch your progress. If you are not performing up to the set standard, you will be given more time to learn the skills and material. Then your skills will be evaluated again.

Your instructor will use the Clinical Performance Records for Levels I, II, and III to measure your progress. Look at these Clinical Performance Records to prepare for your evaluations.

## EVALUATION Level I

After ten days of classroom and clinical experiences related to the Dental, Eye, Ear, Nose and Throat module, you must be able to pass a written test of knowledge about DEENT problems with a score of 80% or higher, and receive at least a satisfactory rating on how you:

- Interview patients about their DEENT problems
- Examine patients with complaints of DEENT problems
- Tell patients about DEENT problems
- Present health messages about DEENT problems

## EVALUATION Level II

After two weeks' clinical practice, you must have the prescribed number of satisfactory ratings on your Clinical Performance Record for:

- Recognizing the abnormal physical signs associated with DEENT problems
- Identifying and caring for sty, conjunctivitis, trachoma, cataracts, vitamin A deficiency, foreign body in the eye, cuts and ulcers in the cornea, eye emergencies, gingivitis, acute ulcerative gingivitis, tooth decay, dental abscess, upper respiratory infection, acute otitis media, chronic otitis media, mastoiditis, external otitis, wax in the ears, acute sinusitis, acute bacterial tonsillitis, a foreign body in the ear, or nose or throat, and nose bleeds
- Performing patient care procedures for cleaning a patient's eyelids; applying eye ointment or eyedrops; removing a foreign body from the eyes, ear, nose or throat; scaling teeth; giving a local dental anesthetic; putting in a temporary filling; pulling out a tooth; cleaning pus from a draining ear; and controlling a nose bleed

## EVALUATION Level III

After three months' community experience, you must have the required number of satisfactory ratings on:

- Diagnosing and treating diseases of the eyes, ears, nose and throat, teeth, and gums
- Providing patients and family members with advice about home care and ways to prevent the spread of DEENT diseases

Conducting community meetings to discuss the prevention and control of DEENT problems

Training a community health worker to assist with the community health program

## *Unit 1*

# **Assessing Patients with Eye Problems**

## **STUDENT GUIDE**

### **OBJECTIVES**

1. Recognize, describe, and explain:
  - Inflammation of the conjunctiva membrane over the sclera
  - Inflammation around the iris
  - Inflammation of the conjunctiva membrane inside the upper eyelids
  - Dry eyes
  - Bitot's spots
  - Foreign body
  - Irregularly shaped pupils
  - Dilated pupils
  - Constricted pupils
2. Identify signs of abnormal eye conditions.
3. Interview a patient about his eye problems.
4. Use proper procedures in examining a patient's eye problem.
5. Record your findings on official forms in the recommended way.

### **LEARNING ACTIVITIES**

1. Learning about eye problems through discussions and presentations by the instructor.
2. Viewing slides on the anatomy and physiology of the eye and eye problems.
3. Practicing how to question people about eye problems.
4. Observing patients and studying pictures to learn about the differences among the signs of eye problems.
5. Interviewing and examining patients and recording findings.

## 1.1 HISTORY OF AN EYE PROBLEM

People usually will seek help when they have any of three main eye problems. First, they will seek help if they start losing their sight or if their vision becomes blurred or unfocused. Second, people will seek help for eye pain. Third, people will seek help when their eyes become red. Loss of clear vision, pain, and redness are the three most important symptoms of eye problems. When you take a history of a patient's eye problems, ask about each of his symptoms. His answers will help you diagnose the problem.

When a patient complains about loss of vision or difficulty seeing, ask:

*"How Long Have You Had This Problem?"*

Cataracts develop slowly over the years. They cause a very gradual loss of vision. In contrast, acute eye emergencies cause blurry vision and blindness in one to two days or less.

*"How Severely Does the Problem Affect You?"*

As many people grow older, they start having trouble focusing on near or distant objects. They may only need glasses.

*"Are One or Both Eyes Involved? Have You Had an Eye Injury?"*

An injury to the cornea can cause blindness in one eye. Cataracts or eye emergency conditions sometimes affect only one eye.

*"Is the Problem Worse at Night or During the Day?"*

Vitamin A deficiency affects vision at dusk and at night. During the day, people with vitamin A deficiency have no problem.

When a patient complains about pain or discomfort in his eyes, ask:

*"Which Eye Hurts?"*

When you examine the patient, compare his eyes. This will help you see minor differences.

*"How Long Have You Had the Pain?"*

Acute eye conditions are often more serious than chronic conditions. Iritis, glaucoma, a corneal ulcer, or an eye injury can quickly lead to blindness.

**"How Did the Problem Start?"**

Sudden pain is a sign of an eye injury. Sometimes a foreign body in the eye causes great discomfort.

When a patient complains of red or watery eyes, ask:

**"Have You Had Any Discharge or Pus in Your Eyes? Are Your Eyelids Crusted in the Morning?"**

Bacterial conjunctivitis produces a pussy discharge from the eye. Viral upper respiratory infections produce watery eye discharges but these do not require treatment.

**"Do Your Eyes Itch?"**

Allergic conditions can make the eyes itch. If the patient says his eyes itch, check for other symptoms of allergies.

**"How Long Have You Had This Problem?"**

Find out whether the eye problem began recently or whether it has bothered the patient for a long time. A problem that began recently is acute. A problem that has lasted a long time is chronic. Acute eye problems are often more severe than chronic eye problems.

**"Have You Noticed Any Swelling?"**

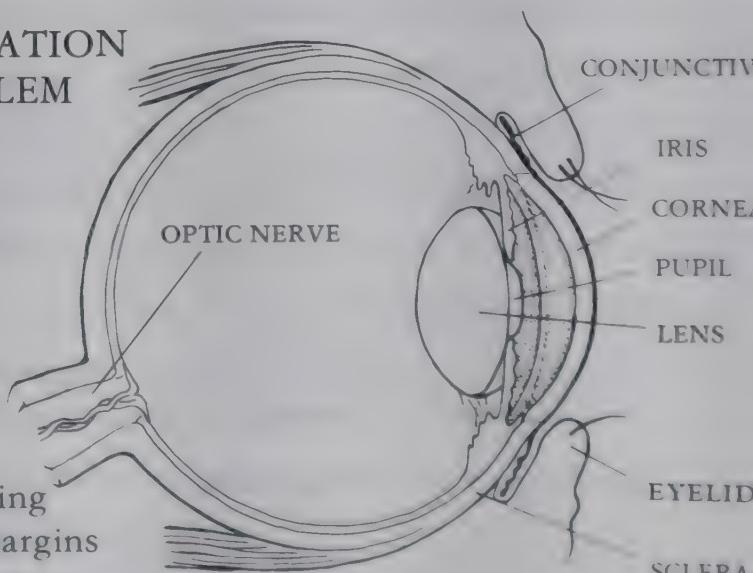
Swelling is a sign of eye inflammation as well as other diseases.

## 1.2 PHYSICAL EXAMINATION FOR AN EYE PROBLEM

After you have questioned the patient and learned the history of his eye problem, examine the patient's eyes. Follow these steps in this order.

***Examine the Eyelid Margins***

Look for signs of swelling or redness along the margins of the eyelids. These are signs of a sty.



### *Examine the Conjunctiva*

The conjunctiva is the mucous membrane inside the eyelids and over the sclera.

- a. Pull down the lower lids and compare the two sides. If only one side is inflamed, look for a foreign body. If both sides are inflamed, check for trachoma and conjunctivitis.
- b. Lift the upper eyelids and compare them. If only one side is inflamed, look for a foreign body. If both sides are inflamed, check for trachoma and conjunctivitis.
- c. Now check the eye for dryness and gray plaque, or spots on the conjunctiva. The dryness and gray spots, or Bitot's spots, are symptoms of vitamin A deficiency.

### *Examine the Sclera*

The sclera is the outer tissue of the eye. A healthy sclera appears white with only a few small blood vessels. When eyes are irritated, blood fills the vessels and they swell.

Compare the sclera around the iris of both eyes. If the sclera of only one eye is inflamed, look for a cut or an ulcer. If the sclera of one or both eyes is inflamed, suspect an inflammation of the iris. This is an emergency eye condition.

### *Examine the Pupils*

At the center of the iris is the pupil. Pupils normally look round and equal in size. In bright light they constrict, or grow smaller. In darkness or shade they dilate, or grow wider. This change in the size of the eye's pupil is called light reflex. When you examine a patient's pupils, check his light reflex by shining a light into his eyes, then taking it away. The pupils should constrict then dilate.

Check your patient's light reflex. Look for these signs of emergency eye problems:

The pupils of both eyes are not the same size

The pupil remains constricted after the light is removed

The pupil of one eye remains larger, or more dilated, than the pupil of the other eye when a light is shined into it

If you see any sign of eye problems, ask your patient about past eye injuries or diseases he may have had. If the patient has no

history of eye problems, any sign of eye problems you find may be very important.

#### *Examine the Cornea*

The normal cornea is clear and transparent. To examine the cornea, shine a light across it from the side. If you see a scratch, wrinkle, bump, or any irregularity, check for an injury. Irregularities on the cornea are a sign of cuts, a foreign body, or an ulcer.

#### *Examine the Lens*

Shine a light directly into the patient's eyes. Normally you will see a pink or red reflection. This reflection comes from the back of the eye. However, you may see a gray or white substance. This is most often a cataract. Decide whether an eye problem is a cataract or a corneal problem.

#### *Check Each Eye Separately*

How well can the patient see? Use eye charts your patient can understand.

## REVIEW QUESTIONS

### Assessing Patients With Eye Problems

1. List the three most common symptoms of an eye problem.
  - a.
  - b.
  - c.
2. List as many abnormal eye signs as you can remember from what you have read. Check your answers against the text.
3. During your physical examination of a patient's eyes, you will identify and record abnormal findings. Samples of abnormal findings are given here. Next to each abnormal finding, explain what eye problem might have caused it.

FINDING	SIGN OF
a. Mild inflammation of conjunctiva of one eye, equal over inside of lids and sclera. The surface of the cornea is irregular.	
b. Inflammation mainly of the conjunctiva inside the upper eyelid of one or both eyes.	
c. Inflammation around the iris of one eye.	
d. Inflammation of the entire conjunctiva seen usually in both eyes.	

e. Eyes appear dry or there are plaques of gray material, Bitot's spots, on the sclera.	
f. One pupil is larger than the other when exposed to the same amount of light.	
g. One pupil remains smaller than the other and may be irregular when exposed to dim light.	

# SKILL CHECKLIST

## Assessing Patients With Eye Problems

This checklist has two purposes.

- 1) Students should use it as a guide for checking their own skills or other students' skills.
- 2) Supervisors should use it when they evaluate how well students assess patients with eye problems.

After observing a student, enter a rating in the appropriate column.

Rating: 1 = Inadequate  
2 = Needs improvement  
3 = Satisfactory  
4 = Above average  
5 = Excellent

When you assess a patient with eye problems, look for:

YES   NO   RATING   COMMENTS

1. Inflammation of conjunctiva over eyelids and sclera				
2. Inflammation of upper eyelids				
3. Inflammation around the iris				
4. Irregularly shaped pupil with a red eye				
5. One pupil that is larger than the other with the same amount of light				
6. One pupil that is larger than the other when exposed to bright light				
7. One pupil that is smaller than the other in dim light				

Obtain the following historical information  
about eye problems:

YES   NO   RATING   COMMENTS

1. Presenting complaint				
2. Onset				
3. Duration				
4. Are one or both eyes involved?				
5. Is the problem worse at any time of day or night?				
6. Has the patient had any problem with the eye before?				
7. Has the patient lost vision in one or both eyes?				
8. Does the patient have blurred vision in one or both eyes or double vision?				
9. Does the patient complain of any associated pain?				
10. Does the patient have any associated symptoms such as fever or rash?				
11. Does the patient report any sign of recent injury?				
12. Does the patient report any aggravating factor?				

YES NO RATING COMMENTS

13. Does the patient report any relieving factor?				
14. Has the patient had any previous treatment?				
15. Does anyone else in the patient's home have this problem?				

Examine the eyes and comment

on:

YES NO RATING COMMENTS

1. Movement of the eyes				
2. Vision of each eye				
3. Reaction of the pupils to light				
4. Crusting of the eyelids				
5. Redness and swelling of lid margins				
6. Inflammation of the conjunctiva				
7. Color of the sclera				
8. Size and shape of the pupils				
9. Surface of the cornea				
10. Clearness of lenses				

# *Unit 2*

## **Eye Problems**

### **STUDENT GUIDE**

#### **OBJECTIVES**

1. Describe the signs and symptoms of:

Sty	Vitamin A deficiency
Conjunctivitis	Foreign body in the eye
Trachoma	Cuts and ulcers in the cornea
Cataracts	Eye emergencies
2. Interview and examine patients for eye problems.
3. Provide treatment for eye problems; clean a patient's eyes, apply eye ointments or eyedrops, and locate and remove a foreign body from a patient's eye.
4. Give patients and their families instructions on caring for their eye problems at home, and on preventing eye problems.

#### **LEARNING ACTIVITIES**

1. Learning about eye problems through discussions and presentations by the instructor.
2. Students will use case studies to practice diagnosing eye problems.
3. In a clinical setting, students will receive instructions, demonstrate, and practice:
  - Identifying eye problems
  - Providing eye treatment and care
  - Giving patients instructions on the care and prevention of eye problems
  - Cleaning patients' eyelids
  - Applying eye ointments and eyedrops
  - Locating and removing a foreign body from patients' eyes
4. Students will have three days of practice in a clinic.

## 2.1 STY

Tiny glands line the margin of the eyelid. When one of these glands becomes infected, a sty forms.

### CLINICAL PICTURE

#### a. Presenting complaint

The patient will complain of pain. The amount of pain depends upon the amount of infection within the gland.



#### b. Medical history

Patients with sties will often tell you they have had them before.

#### c. Physical examination

Examine the margin of the eyelid. Look for a red lump which is very tender.

### COURSE AND COMPLICATIONS

The entire eyelid can become red and swollen.

### PATIENT CARE

- a. Apply warm, wet compresses to the infected eye for thirty minutes, three times a day.
- b. After each soak, apply 1% tetracycline eye ointment to the eye. Repeat this process until the sty goes away.
- c. If the sty continues to grow, or if it does not begin to clear up after forty-eight hours, refer the patient to a doctor.

## 2.2 CONJUNCTIVITIS

Viruses and bacteria cause conjunctivitis. The mucous membrane inside the eyelids and covering the eye become inflamed and red. The infection quickly spreads from one person to another. It will continue to spread as long as any signs or symptoms of the infection exist. You will probably see conjunctivitis more than any other eye problem.

### CLINICAL PICTURE

#### a. Presenting complaint

Your patient will say he feels a burning, like sand in his eyes. Both eyes may be infected and **red**.

#### b. Medical history

Ask the patient if his eyes have been **red**. Many virus infections can cause conjunctivitis. These include measles and upper respiratory infections. The eyes will be red for only a few days. They may already have cleared by the time you see the patient.

#### c. Physical examination

The symptoms of conjunctivitis point to the cause of infection. If a virus has caused the infection, you will see a **watery discharge**, runny nose, cough, and other symptoms of an upper respiratory infection. When the infection is caused by bacteria, the eyelids will have a **pussy discharge**. The patient may say his eyelids stick together in the morning. The eyelids may be swollen.

### COURSE AND COMPLICATIONS

After starting in one eye, a conjunctivitis infection usually will spread to the other eye. Severe cases can cause an ulcer on the cornea and damage eye tissue. Gonorrhea infections cause conjunctivitis in newborn infants. See the Infants and Children module for more information about gonorrhea.

### PATIENT CARE

Newborn infants who have symptoms of conjunctivitis should be treated for gonorrhea as well as conjunctivitis. Do not treat patients

who have conjunctivitis caused by virus infections. You should treat conjunctivitis caused by bacteria.

- a. Check very carefully for any damage to the eye tissue. If you find any signs of damage, such as an ulcer on the cornea, send the patient to a hospital.
- b. If you have not found any damaged eye tissue, clean the eye.
- c. Apply 1% tetracycline eye ointment. See Patient Care Procedures.
- d. Teach the patient and the patient's family how to clean the infected eye and apply the eye ointment. Warn the patient and his family that conjunctivitis can easily spread. Tell the family that each person should use clean water and clean towels when washing.
- e. Do not use eye patches over conjunctivitis infections.

### PREVENTION

Prevent conjunctivitis from spreading by examining your patient's family and friends for symptoms. The infection can spread through a community, a school, or a family. To prevent conjunctivitis caused by gonorrhea you can apply 1% tetracycline eye ointment or two drops of 1% silver nitrate solution to both eyes of all babies as soon as they are born.

## 2.3 TRACHOMA

Trachoma is a virus infection. It affects about one-sixth of all the earth's people, blinding many of them. Trachoma infects more children than adults, but it can infect anyone. You will find trachoma where you find a poor water supply and poor hygiene. Flies spread the infection. People also spread the infection by sharing towels, clothing, bath water, and being in close contact.

### CLINICAL PICTURE

#### a. Presenting complaints

The patient will complain of tears, **itching**, **redness**, and discharges in **both eyes**. The condition may have started **one month** or more before.

b. Medical history

Trachoma develops slowly, taking several months before symptoms appear. Its earliest stage involves only the conjunctiva membrane of the *upper eyelids*. Later, the itching, tearing, redness and discharges increase. Many children who contact trachoma go untreated because the disease never develops to a stage where it is diagnosed.

c. Physical examination

In the earliest stage of trachoma, the conjunctiva of the upper eyelid appears *red* and rough. This condition may last for several months. However, as the disease develops, a gray membrane forms on the upper edge of the cornea. If ulcers develop in this membrane on the cornea, the infected person loses some or all of his sight. The ulcers last six to twelve months.

#### COURSE AND COMPLICATIONS

Trachoma scars the conjunctiva. It *turns the upper eyelid inward* so that the eyelashes rub against the cornea. This causes even more damage to the eye. Trachoma infection and *scarring of the cornea* can cause partial or complete loss of vision.

#### PATIENT CARE

- a. In the early stages of trachoma infection, apply 1% tetracycline eye ointment three times a day for three weeks. This may control the infection.
- b. For advanced stages of trachoma, give oral tetracycline or sulfonamide for two weeks. See Patient Care Guides. Do not give tetracycline to children less than eight years old. Also, oral sulfonamide treatment requires careful supervision to avoid complications from the drug. The patient taking sulfonamide must drink extra water during his treatment.
- c. Immediately refer all patients with complications of trachoma to a hospital.

#### PREVENTION

- a. Because trachoma easily spreads from one person to another, examine and treat all the people in the patient's family, school, and community.

- b. Tell people they can prevent the spread of trachoma by washing their hands and face often. Also, they should use clean towels not shared by others.



- c. Tell families, school children, and teachers about ways they can prevent trachoma from spreading. Tell them about the need for washing and for controlling flies.

## 2.4 CATARACTS

Cataracts cloud the lenses inside the eyes. Some patients may have cataracts in only one eye, but the disease usually affects both eyes at once. Old people often develop cataracts, but the disease can occur in young people as well. They cause many people to go blind. However, cataracts can be surgically cured.

### CLINICAL PICTURE

#### a. Presenting complaint

A person with cataracts complains of *blurred vision*. The vision gradually worsens during the following months or years.

**b. Medical history**

When young people develop cataracts in their eyes, you will often find that the disease has occurred in their families before. You will find more *old people* with cataracts than young people. Patients will tell you the condition is *painless* and that they have not seen any redness in their eyes.

**c. Physical examination**

The patient's loss of vision depends on the severity of the cataract. Shine a light directly into the patient's eye. Examine the lens. Cataracts will make the *lens* seem slightly *whitish*, completely *white*, or *gray*. In a normal eye, you will see a red reflection from the retina at the back. This red reflection disappears as a cataract develops.

**COURSE AND COMPLICATIONS**

The need for treatment depends upon the amount of visual loss. Many people with cataracts are still able to see well. Cataracts will not improve with time. If the cataract causes serious loss of vision, a doctor must surgically remove it. After surgery, most patients' vision improves with the use of an artificial lens or glasses.

**PATIENT CARE**

Refer patients with cataracts to a hospital. An eye surgeon will decide whether surgery will improve the patient's vision. The surgeon will base his decision on the amount of vision loss. If the patient can still see light and some movement, surgery will probably improve his vision.

**2.5 VITAMIN A DEFICIENCY**

Certain foods contain the chemical vitamin A. Dark green vegetables, leafy vegetables, yellow vegetables, milk, eggs, liver, and kidneys all contain much vitamin A. Healthy eyes depend on these kinds of foods. Without vitamin A, people would lose their sight. Growing children especially need vitamin A for their eyes.

**CLINICAL PICTURE****a. Presenting complaint**

Lack of vitamin A first causes poor vision in the *evening* and at *night*.

This is called night blindness. Parents describe night blindness when they tell you their children stumble and fall or seem clumsy in the evening and at night.

**b. Medical history**

Children who are ill from another disease may eat poorly. These malnourished children lack vitamin A. Always suspect vitamin A deficiency in sick, malnourished children. Malnourished adults may also lack vitamin A.

**c. Physical examination**

Vitamin A deficiency dulls the shiny surface of the eye. The conjunctiva over the eye appears dry. Then small plaques of gray materials appear. These small plaques are also called Bitot's spots.

### COURSE AND COMPLICATIONS

If vitamin A deficiency is not treated by the time small gray plaques, or Bitot's spots, appear on the eye, the problem quickly worsens. The cornea of the eye becomes dull, then blue-gray. The eye softens. Ulcers form. Then the vision quickly and completely fails.

### PATIENT CARE

- a. Tell the person with night blindness that he must eat foods which have much vitamin A. These foods include dark green vegetables, leafy vegetables, yellow vegetables, milk, eggs, liver, and kidneys.
- b. If vitamin A deficiency continues or if you see a dryness in the patient's eyes, give vitamin A capsules daily for two weeks. See Patient Care Guides. Children should take one dose of vitamin A each month until they start school.
- c. If you see any sign of damage to the cornea of the eye, immediately send the patient to the hospital as an emergency case.

### PREVENTION

- a. Eating foods which contain vitamin A will prevent night blindness and more serious stages of vitamin A deficiency. This requires community education.

- b. Always look for vitamin A deficiency in children who have been sick or children who are malnourished. Ask about night blindness. Examine the conjunctiva for dryness. Treat vitamin A deficiency early. You can treat it at this stage with good results. This will prevent blindness.

## 2.6 FOREIGN BODY IN THE EYE

Sand and splinters of wood, rock, metal, or glass can easily enter the eye. These foreign bodies in the eye can cut the cornea or slice deep into the eye. People who work with hard materials that they cut or break should wear safety glasses.

### CLINICAL PICTURE

#### a. Presenting complaint

The patient will complain of something in his eye. He can usually point to where he feels it. The **pain** grows worse when the patient blinks.

#### b. Medical history

The pain usually comes suddenly, as soon as the foreign body enters the eye. The patient may complain of **pain** from light.

#### c. Physical examination

The conjunctiva is often **red** and there may be **tearing**. You may be able to see the **foreign body** on the cornea. However, you will usually find **foreign bodies** in the eye under the upper eyelid. See instructions for locating and removing foreign bodies from the eye in the Patient Care Procedures.

### COURSE AND COMPLICATIONS

Any injury to the cornea can cause an ulcer and blindness.

### PATIENT CARE AND PREVENTION

- a. Follow Patient Care Procedures for removing a foreign body from the eye.
- b. If you do not see any injury to the cornea, apply an antibiotic eye ointment. Cover the eye with a patch. Tell the patient to remove the

patch in the morning. Also, tell the patient to return if pain and redness continues in the eye.

- c. If you see damage to the patient's cornea, patch both his eyes and refer him to a hospital. If your patient cannot get to a hospital, apply an antibiotic ointment and patch both his eyes. Continue to apply the ointment and patches until the cornea has completely healed and the eye appears normal.
- d. People who work with materials that may harm their eyes should wear protective glasses.

## 2.7 CUTS AND ULCERS IN THE CORNEA

Foreign bodies in the eye can cut the cornea. Also, conjunctivitis caused by virus or bacteria can form ulcers in the cornea. Whenever the smooth surface of the cornea is injured, infection occurs very easily. Treat any injury to the cornea as an emergency because any injury can lead to scarring and permanent blindness. People who work as woodcutters, blacksmiths, or stone masons should protect their eyes from possible injury.



### CLINICAL PICTURE

#### a. Presenting complaint

The patient complains of blurry vision and pain. Light causes discomfort. He may tell you of some injury, or trauma, to the eye.

#### b. Medical history

If a **foreign body** has injured the eye, the patient will tell you the pain began suddenly. In other cases you may find the symptoms of severe conjunctivitis.

### c. Physical examination

Suspect a cut or ulcer in the cornea when you see that the conjunctive is **red**. **Tearing** and discharge from the affected eye also indicates a cut or ulcer. Examine the **cornea** with a cross light. You may see a **white or gray spot** or a **line** on the surface of the eye.

## COMPLICATIONS

An ulcer can scar the cornea and cause a loss of vision. Also, an ulcer can erode the cornea and spread infection to the inside of the eye. Consider a cut or ulcer in the cornea as an emergency. Refer the patient to a hospital.

## PATIENT CARE

Cuts on the surface of the cornea can become an ulcer. Treat cuts as you would an ulcer. Apply an antibiotic patch to both eyes, and refer the patient to a hospital. If the patient cannot get to a hospital, treat him as follows.

- a. Apply 1% tetracycline eye ointment.
- b. Tape an eye patch or sterile gauze pad over the eye.
- c. Reapply eye ointment three times each day. Apply a clean eye pad each time.
- d. Treat the patient daily until all signs of a cut or ulcer on the cornea have cleared.
- e. Give aspirin every three or four hours to ease pain.

## PREVENTION

People who work with materials that may harm their eyes should wear protective glasses.

## 2.8 EYE EMERGENCIES

### CLINICAL PICTURE

#### a. Presenting complaint

Eye emergencies begin with pain and loss of vision. One eye or both eyes may hurt.

**b. Medical history**

A patient with an emergency eye problem will usually tell you the pain or loss of vision began a short time ago. This **recent onset**, along with **loss of vision**, gives you two important signs of an emergency problem. If trauma is involved, see Trauma and Emergency module. Also, people who have chronic illnesses such as tuberculosis and leprosy may have emergency eye problems.

**c. Physical examination**

Carefully test the patient's vision. Use an eye chart he can understand. Shine a light into his eyes. Examine the cornea. It should be clear. A cloudiness in the cornea means the eye problem may be serious. Examine the conjunctiva. Look for **redness around the iris**. Examine the pupils. See if they are round and of equal size in both eyes. Check how they react to light. If you see that the pupils are **irregular** or different sizes, then the eye problem may be an emergency. If the pupils are very **small** or very **large** or if they **do not react to light**, you may have more signs of emergency eye conditions.

**COURSE AND COMPLICATIONS**

Emergency eye conditions mean the patient is in danger of losing his sight. He may lose his sight within one or two days if he receives no treatment.

**PATIENT CARE**

If you find any emergency eye condition, immediately send the patient to a doctor.

## REVIEW QUESTIONS

### Eye Problems

1. List two reasons why you should properly clean a patient's eyes before applying any eye medication.
2. When cleaning a patient's eyes, you should: (Check the correct answers.)
  - a. Use only a dry, sterile applicator
  - b. Use sterile saline on a sterile applicator
  - c. Scrub off the crusts using pressure
  - d. Gently scrub off the crusts
  - e. Start near the nose and clean toward the ear
  - f. Start near the ear and clean toward the nose
3. Washing your hands with soap and water is always important when caring for a patient. If you are about to clean a patient's eyes, when should you wash your hands? (Check the correct answer.)
  - a. Before starting to clean the eyes
  - b. After cleaning the eyes
  - c. Both before and after cleaning the eyes
4. You have decided that a child has a bacterial conjunctivitis. You want to apply 1% tetracycline eye ointment. On your stock shelf you find two boxes with tubes of 1% tetracycline eye ointment. The expiration date for the ointment in one box is September 1981. The expiration date for the ointment in the second box is June 1982. From which box would you select a tube of ointment if today's date was 10 August 1981? Why?
5. Where on the eye should eyedrops or ointment be applied?

6. What would you do if the eyedrops run out of the eye or the ointment slides out of the eye before the lid closes?
7. Write in the information that would help you to make the diagnosis of a sty.

Presenting complaint:

Patient history:

Physical examination:

8. What is a complication of severe conjunctivitis?
9. A trachoma infection easily spreads from person to person. List three examples of how trachoma spreads.
  - a.
  - b.
  - c.
10. Suppose you find that many people are coming to your health center with trachoma. These people live in the same community. What could you and members of your health team do to decrease the spread of trachoma in this community?
11. You diagnose a child's eye problem as advanced trachoma. The child weighs 50 kg. You decide to treat the child with sulfadiazine. Use your Patient Care Guide to answer these questions.
  - a. How many milligrams of sulfadiazine would you give the child for his first dose?

- b. How many milligrams of sulfadiazine would you give the child during one of the four doses to be given in a day?
12. A sixty-seven year old man comes to you complaining that "things look blurry." In response to your questions, he says his problem has been getting worse during the last six months. When he closes one eye at a time, the problem seems to be in his right eye. He has not had any pain or redness in his right eye recently. He said that he did get something in his right eye about a month ago, but he washed it out himself. He thinks that maybe his mother had the same problem when she got old, but she didn't believe in doctors so she never went to see anyone about her problem.
- His vital signs are normal. A general physical examination shows that he is healthy for his age. An eye chart test shows you he has minor problems seeing with his left eye, but has much more difficulty seeing with his right eye. When you shine your flashlight on the lens of the right eye, the lens looks milky white. This is the only abnormal finding of the right eye.
- a. What do you suspect the problem to be?
- b. How would you care for this patient?
13. Describe the symptoms of vitamin A deficiency in a child.
- a. Presenting complaint:
- b. Patient history:
- c. Physical examination:
14. What is the best way to prevent vitamin A deficiency in children?
15. You should always suspect vitamin A deficiency in some children. How can you know which children these are?

16. Describe the two most important symptoms of an acute eye emergency.
- a.
  - b.
17. You have found a foreign body in a patient's eye. Write two reasons why you might have to send this patient to a hospital.
- a.
  - b.
18. Injury of the cornea is an emergency because it can quickly lead to \_\_\_\_\_ and permanent \_\_\_\_\_.
19. Can conjunctivitis cause a corneal ulcer? (Check the correct answer.)
- a. No, even if it is a severe conjunctivitis.  
 b. Yes, if it is a severe conjunctivitis.
20. A young man has come in with a urethral discharge and you suspect that he has gonorrhea. This is the first time you have seen this patient. He tells you that he has had this problem before. While telling the patient that his wife will have to come in for treatment, you find out that his wife had a baby two days ago. The baby was delivered at home.
- a. What problem do you suspect the baby may have?
  - b. What could happen to the baby if this problem goes untreated?
  - c. What medicine can be put into the eyes of newborns to prevent this problem?

## REVIEW EXERCISE

### *Case Study 1*

---

Name of Patient:	Field, Stella
Sex:	Female
Date of Birth:	29 June 1941
Date of Visit:	7 December 1979
Urine:	Normal
Vital Signs:	Temperature 36.5° C Pulse 82 Respirations 22 Weight 73 kg
Presenting Complaint and Medical History:	The patient says her right eye has been painful for one week. The pain is gradually growing worse. Now it is a jabbing pain. She first felt the pain at the beach. She thinks some dust or sand got into her eye, but she did not pay any attention to it. Nothing seems to ease the pain. Wind or breeze in her eye hurts. A watery discharge is visible. Her vision is slightly blurred. She feels a slight, dull headache. Light causes discomfort. She has no cough. Her appetite is good. Her bowels are regular. Her urine shows no sign of problems.
Physical Examination:	The pupils of her eyes are normal. The conjunctiva membrane and sclera of her right eye are red. Her tongue is moist. Her tonsils are normal. Her breath sounds normal. Her chest, heart, and abdomen are normal.  A gray spot is on the eye. The spot is not a foreign body.

Study the information given. Then answer these questions for discussion.

1. What is the diagnosis?

2. What information in the case study was most helpful in making your diagnosis?
3. Use your Patient Care Guides to write what treatment you would give this patient.
4. What advice would you give this patient and her family?

## REVIEW EXERCISE

### Case Study 2

Name of Patient:	Ryan, Fred
Sex:	Male
Date of Birth:	24 January 1963
Date of Visit:	12 July 1979
Vital Signs:	Temperature      37.1° C Pulse                72 Respirations        22 Blood Pressure     110/80 Weight              61 kg
Presenting Complaint and Medical History:	Patient Fred Ryan has had an inflamed left eye for the past three days. The problem began suddenly. He woke one morning with the pain in his eye. He says the pain feels like sand in his eyes. The problem stays the same. It is not getting better or worse. He cannot think of anything that aggravates the eye. The patient says he has had a watery discharge from the affected eye. The patient sneezes. He does not report any loss of vision or signs of blurriness. He has no fever or headache. He has not been vomiting. No history of trauma or foreign body in the eyes. He says his appetite is good. He has not lost any weight. Occasionally he is constipated. He reports a mild cough, but no shortness of breath.
Physical Examination:	Fred is a healthy looking boy. His mucous membranes look healthy. The conjunctiva of his left eye is red. The left pupil is normal size. His tongue and tonsils appear normal. His breath has a slight murmur. His chest, heart, and abdomen are normal.

Study the information given. Then answer these questions for discussion.

1. What is the diagnosis?
2. What information in this case study was most helpful in making your diagnosis?
3. Use your Patient Care Guides to write what treatment you would give this patient.
4. What advice would you give this patient and his family?

## REVIEW EXERCISE

### Case Study 3

Name of Patient: Johnston, Adam

Sex: Male

Date of Birth: 14 March 1935

Date of Visit: 8 December 1979

Vital Signs: Temperature 37.1° C

Pulse 22

Respirations 20

Weight 63 kg

Presenting Complaint and Medical History: The patient complains of a pain which has bothered his left eye for the past four days. His eyes have been red and tearing for the past three to four months. The pain has grown worse during the past four days. He feels pain when he exposes the affected eye to sunlight.

Physical Examination: The conjunctiva of both eyes are inflamed. The inflamed condition appears to be worse on the upper eyelids. He has a rough, gray area on the cornea of the left eye.

A discharge comes from the patient's nose. His tonsils are red. The lymph glands are normal. His heart is normal. His abdomen is normal.

Study the information given. Then answer these questions for discussion.

1. What is the diagnosis?
2. What information in the case study was most helpful in making your diagnosis?
3. Use your Patient Care Guides to write what treatment you would give this patient.
4. What advice would you give this patient and his family?

## REVIEW EXERCISE

### Case Study 4

Name of Patient:	Ray, John
Sex:	Male
Date of Birth:	1 May 1977
Date of Visit:	5 December 1979
Vital Signs:	Temperature 37° C Pulse 90 Respirations 18 Weight 22 kg
Presenting Complaint and Medical History:	The child's mother says she has noticed that her boy stumbles in the dark. She first noticed this about a month ago. The boy started to walk at one year of age. His appetite is poor. Because the boy stumbles at night, his mother thinks he has trouble seeing. Sometimes his eye is red and tearing. Sometimes fluid runs from his right ear. Sometimes the boy has a cough.  The child has not had immunizations. He has had diarrhea several times during the past two months.
Physical Examination:	The boy appears poorly nourished. He does not seem very alert.  The cornea and conjunctiva seem dull. A mild inflammation is present. His reflex to light is normal. His cornea is clear.  Discharge is present in the right ear canal. A swelling appears on the right side of the boy's neck. A dry rattling can be heard over his whole chest.

Study the information given. Then answer these questions for discussion.

1. What is the diagnosis?

2. What information in the case study was most helpful in making your diagnosis?
3. Use your Patient Care Guides to write what treatment you would give this patient.
4. What advice would you give this patient and his family?

# SKILL CHECKLIST

## Cleaning the Eyelids

This checklist has two purposes.

- 1) Students should use it as a guide for checking their own skills or other students' skills.
- 2) Supervisors should use it when they evaluate how well students clean a patient's eyelids.

After observing a student, enter a rating in the appropriate column.

Rating: 1 = Inadequate  
2 = Needs improvement  
3 = Satisfactory  
4 = Above average  
5 = Excellent

When cleaning the eyelids:      YES    NO    RATING    COMMENTS

1. Collect the equipment and material you will need				
2. Wash your hands with soap and water				
3. Position the patient lying down with his head flat on the table				
4. Moisten sterile gauze or a cotton-tipped applicator in saline				
5. Start washing the eyelid near the nose and work toward the ears				
6. Gently wash the eyelid until the crusts and pus are gone				

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YES NO RATING COMMENTS

7. Blot dry with sterile gauze				
8. Clean the eyelids of both eyes before putting in the medication				
9. Wash your hands with soap and water				
10. Tell the mother how to clean the eyelids, if necessary				
11. Have the mother demonstrate the procedure				
12. Show the mother how to make the saline solution, boiling it and a cloth, if necessary				

# SKILL CHECKLIST

## Application of Eye Ointment or Eyedrops

This checklist has two purposes.

- 1) Students should use it as a guide for checking their own skills or other students' skills.
- 2) Supervisors should use it when they evaluate how well students apply eye ointment or eyedrops.

After observing a student, enter a rating in the appropriate column.

Rating: 1 = Inadequate  
2 = Needs improvement  
3 = Satisfactory  
4 = Above average  
5 = Excellent

When applying eyedrops or eye  
ointment:

YES   NO   RATING   COMMENTS

1. Collect the materials				
2. Wash your hands with soap and water before starting				
3. Explain to the patient what you're going to do				
4. Clean any crusts and pus from the eye				
5. Position the patient lying down				
6. Pull the lower eyelid down exposing the conjunctiva				
7. Ask the patient to look upward				

	YES	NO	RATING	COMMENTS
8. Apply the eyedrops or ointment on the conjunctiva of the lower eyelid near the eyelid margins				
9. Avoid touching the conjunctiva with the tip of the container				
10. Slowly release the lower eyelid				
11. Repeat the procedure if the drops or ointment drip out of the eye				
12. Show someone in the patient's family how to put in the eyedrops or ointment				
13. Ask a family member to demonstrate the procedure				

# SKILL CHECKLIST

## Locating and Removing a Foreign Body from the Eye

This checklist has two purposes.

- 1) Students should use it as a guide for checking their own skills or other students' skills.
- 2) Supervisors should use it when they evaluate how well students locate and remove a foreign body from a patient's eye.

After observing a student, enter a rating in the appropriate column.

Rating: 1 = Inadequate  
2 = Needs improvement  
3 = Satisfactory  
4 = Above average  
5 = Excellent

When removing a foreign body  
from a patient's eye:      YES    NO    RATING      COMMENTS

1. Collect equipment and materials				
2. Wash your hands with soap and water				
3. Explain to the patient what you are going to do				
4. Tell the patient to lie down with his head flat on a table				
5. Use a good light source				
6. Ask the patient where he feels the foreign body				
7. Look first where the patient feels the foreign body				

	YES	NO	RATING	COMMENTS
8. Fold the upper eyelid over the wood end of an applicator				
9. Tell the patient to look down while you examine the upper eyelid				
10. Place your index finger or thumb on the skin below the lower eyelid, and press down to see the inner eyelid				
11. Have the patient look upward to the left and right while you examine the lower eyelid				
12. Prepare to wash the eye. Position the patient so his affected eye is lower than his normal one				
13. Use sterile saline solution				
14. Have the patient hold a basin along his cheek				
15. Hold the eye wide open				
16. Flush the eye, starting on the inner side so the saline solution will flow toward the ear				
17. Tell the patient to move his eye in all directions while you flush it with saline solution				
18. Dry the eyelids with a sterile gauze or a dry towel				

YES NO RATING COMMENTS

19. If flushing the eye fails, use a cotton-tipped applicator				
20. Moisten the cotton tip with saline solution				
21. Have the patient lie on his back with his eye as wide open as possible				
22. Gently wipe the foreign body out. Do not wipe across the cornea				
23. Examine the cornea for a cut or an ulcer, using a good light				
24. Apply an antibiotic ointment				
25. Apply an eye patch after putting in the eye ointment				
26. Refer the patient immediately if you are unable to find or remove the foreign body				
27. Refer the patient immediately if you find a corneal laceration or ulcer				
28. Apply an eye patch and ointment				
29. Tell the patient to take off the eye patch at home the next morning and return if he sees any redness or feels pain				

## *Unit 3*

# **Prevention of Blindness in the Community**

### **STUDENT GUIDE**

#### **OBJECTIVES**

1. Decide what makes a good community meeting.
2. Make a checklist for assessing community presentations.
3. Present a health message to the class or other groups.

#### **LEARNING ACTIVITIES**

1. Using your own experience to understand the best ways to hold a community meeting.
2. Studying a sample community presentation to decide what parts of it will work in your community.
3. Making a presentation for a community meeting.
4. Practicing your presentation before small groups of students.

### 3.1 PREVENTION OF BLINDNESS IN THE COMMUNITY

Poor nutrition causes more people to go blind than any other problem. Poor nutrition especially affects children. Yet this major cause of blindness can be prevented if people eat the right kind of foods.

The right foods are those which contain vitamin A. These are the dark green vegetables, leafy vegetables, yellow vegetables, milk, eggs, liver, and kidneys. You may know of other foods in your community that have high vitamin A content. By encouraging parents to feed their children these foods and by encouraging children to eat them, you will prevent one of the leading causes of blindness.

If you know a community where vitamin A deficiency threatens children's eyesight, you will want to do two things. First, you will want to show the people that the problem is a serious one. Then you will want to show the people how they can easily prevent the problem. One of the best ways to do this is to plan a community meeting.

Remember, you should share what you know about blindness. At the same time, you should listen to what the people in the community have to say about the problem. People understand better and remember longer when they are involved in the talk.

Here is an example of what you might do in a community where you have found children with vitamin A deficiency, and you think a community meeting will help solve the problem.

#### *Sample Community Meeting*

This health worker has decided to make a community presentation on ways to prevent blindness caused by vitamin A deficiency. He knows one of the symptoms of vitamin A deficiency is night blindness. He also knows that several children in the community suffer from it. He plans the meeting at dusk and invites both the parents and their children.

First, the health worker thanks the people for coming. Then he says:

**Health Worker:** Today we have decided to meet in the evening for a special reason. Some of you have noticed that your children act clumsy at night. They do not seem able to see things well.

Uncle: They have chicken blindness.

Health Worker: You can call it that. Or you can call it night blindness. They are the same thing. Night blindness or chicken blindness is a sign that some of our children are in danger of losing their eyesight.

Today, we will first see how many of our children cannot see well at night. Then we will talk about ways to help them see better.

While we still have a little evening light, I will blow out this lamp. We will see how many children can see in this light. When children have difficulty seeing in this light, they show the first sign of blindness. I am going to put this fruit in different parts of the room. Can you all see them?

Voices: Yes.

Health Worker: Now I am going to ask Stewart to come get one.

Stewart easily finds a mango.

Health Worker: Now, Jane, would you like a mango, too? I am going to move the mangoes. Can you find the mangoes now?

Jane has difficulty finding the mangoes. Some of her friends may try to help her, but Jane still cannot see the mangoes. The health worker then asks other children to find the mangoes. He takes care not to embarrass any of the children who cannot see, or their parents, explaining that many children have this problem and that it can be cured.

Health Worker: Now you see that Stewart had no difficulty finding the mangoes in this light. Jane and others had some difficulty. They find it difficult to see in the dark. Do you know why they have this problem?

Uncle: They do not sleep enough so their eyes get tired.

Health Worker: I want to share another reason why some children cannot see in the evening. This happens when children do not get some kinds of foods.

Grandmother: We have been eating foods grown in this village for a long time. When I was young no one had this pro-

blem. We used to play hide and seek in the dark. I cannot remember this being a problem with any of us when we were growing up.

**Uncle:** In the old days everyone used to eat green, leafy vegetables. Our mother never used to throw away those good green leaves. Nowadays everyone throws away the greens because they think they are not good.

**Grandmother:** Should we still be eating all those greens? My grandchildren think we should give them to the cows.

**Uncle:** That is why the cows can see well.

**Aunt:** But these greens only grow in the first few months of the year. What do we do for the rest of the year?

**Health Worker:** Let's ask Grandmother who has lived in this village for seventy years. What did they do with greens in your days, Grandmother?

**Grandmother:** Keeping greens was very simple. We used to dry them and keep them in a pot. I used to add them to all the soups and other foods we eat. You can come to my house and see that even now. No one likes doing these things these days.

**Health Worker:** Grandmother can still see very well. She has shared with us some good things from the old days. If all your children eat greens like Grandmother, they will be able to see well even when they grow up.

**Mother:** You showed that my daughter, Jane, cannot see very well in the dark. What can I do to help her see better?

**Health Worker:** You should give her the vegetables we have been talking about. Also talk to your community health worker. She can help you.

## REVIEW EXERCISE

### **Critique of Sample Community Meetings**

Use this form to note what you liked or disliked about the sample community meeting presentations give by your classmates. Note the strengths and weaknesses of the sample meetings.

STRENGTHS	WEAKNESSES
Group 1:	
Group 2:	
Group 3:	
Group 4:	

## **REVIEW EXERCISE**

### **Developing a Skill Checklist**

Use your critique of sample community meetings to develop this skill checklist. You will use this checklist to assess community meeting presentations in the class.

#### **SKILL CHECKLIST FORM**

#### **Presenting Health Messages to Groups**

Students should use this skill checklist as a guide for checking their own skills or other students' skills.

After observing a student, enter a rating in the appropriate column.

Rating: 1 = Inadequate  
2 = Needs improvement  
3 = Satisfactory  
4 = Above average  
5 = Excellent

During your presentation:

YES   NO   RATING

COMMENTS


# *Unit 4*

## **Dental Health**

### **STUDENT GUIDE**

#### **OBJECTIVES**

1. Identify and describe common dental problems.
2. Explain the causes of common dental problems.
3. List materials people can use to keep their teeth and gums clean.
4. Develop and practice community education presentations on dental health.

#### **LEARNING ACTIVITIES**

1. Discussing why people in your community have dental problems.
2. Identifying local materials that will make good brushes for cleaning teeth.
3. Listing store foods that are bad for teeth.
4. Working in small groups with information from the student text to develop community education presentations and materials.
5. Assessing presentations on dental health made by other groups of students.

## 4.1 DENTAL HEALTH IN THE COMMUNITY

Tooth decay and gum disease are becoming common health problems in most communities. These problems are caused by changes in peoples' eating habits and a lack of good tooth and gum care.

### Old and New Eating Habits

Traditionally people ate only foods that they grew. These foods were natural and good for their teeth as well as for their bodies. Foods like whole grains, fresh vegetables, fruits, nuts, and milk all kept teeth and gums strong and helped to protect them.

Today, however, people buy many foods from stores. Some of these foods harm teeth and gums. Store foods that are already cooked and ready to eat are often soft and sticky. They stick to the teeth more than traditional foods. Store foods are also sweet. They contain sugar which causes tooth decay and spoils the gums. Children who eat many sweet foods or candy risk harming their teeth.

## 4.2 GOOD FOODS BUILD STRONG TEETH AND HEALTHY GUMS

Some foods keep our teeth and gums strong. Some foods protect our teeth and gums. To have good teeth, children should eat the right foods from the start. Mothers should breastfeed their babies. Sweet drinks like sugar water or tea and juices when sucked from a bottle are not good for a baby's gums or teeth. Breast milk gives the baby strong and healthy gums and protects them. Mothers should continue to breastfeed their babies for as long as possible, even when they begin to get teeth. Breast milk helps the child grow strong and healthy teeth.

Children should not eat sweet foods. Sweet foods cause tooth decay faster than other foods. Sweet foods also spoil the gums. Children who eat too much sweet food live with bad teeth all their lives. Bad teeth and gums are painful. Bad teeth make proper eating and speaking difficult.

Give the growing child plenty of traditional foods like grains, vegetables, beans, fruits, milk and eggs. Meat, fish, and poultry are also good. These

natural foods help children grow strong teeth and gums, and help to protect them.

Many adults have painful tooth decay, gum disease, or infections. People who have these dental problems probably did not eat the right kinds of foods when they were young. Some adults continue to eat the wrong kinds of foods, like sweet foods. This makes children in the house also want sweet foods.

Foods that are good for growing children are also good for adults.



EAT THESE FOODS



NOT THESE FOODS

#### 4.3 CARE OF THE TEETH AND GUMS

Children and adults get tooth decay and gum disease when they do not keep their teeth and gums clean. Good dental care means brushing away bits of food that stick to teeth and cause holes.

To keep your teeth clean, you need a brush that can reach bits of food that get stuck:

In grooves on the tops and sides of teeth

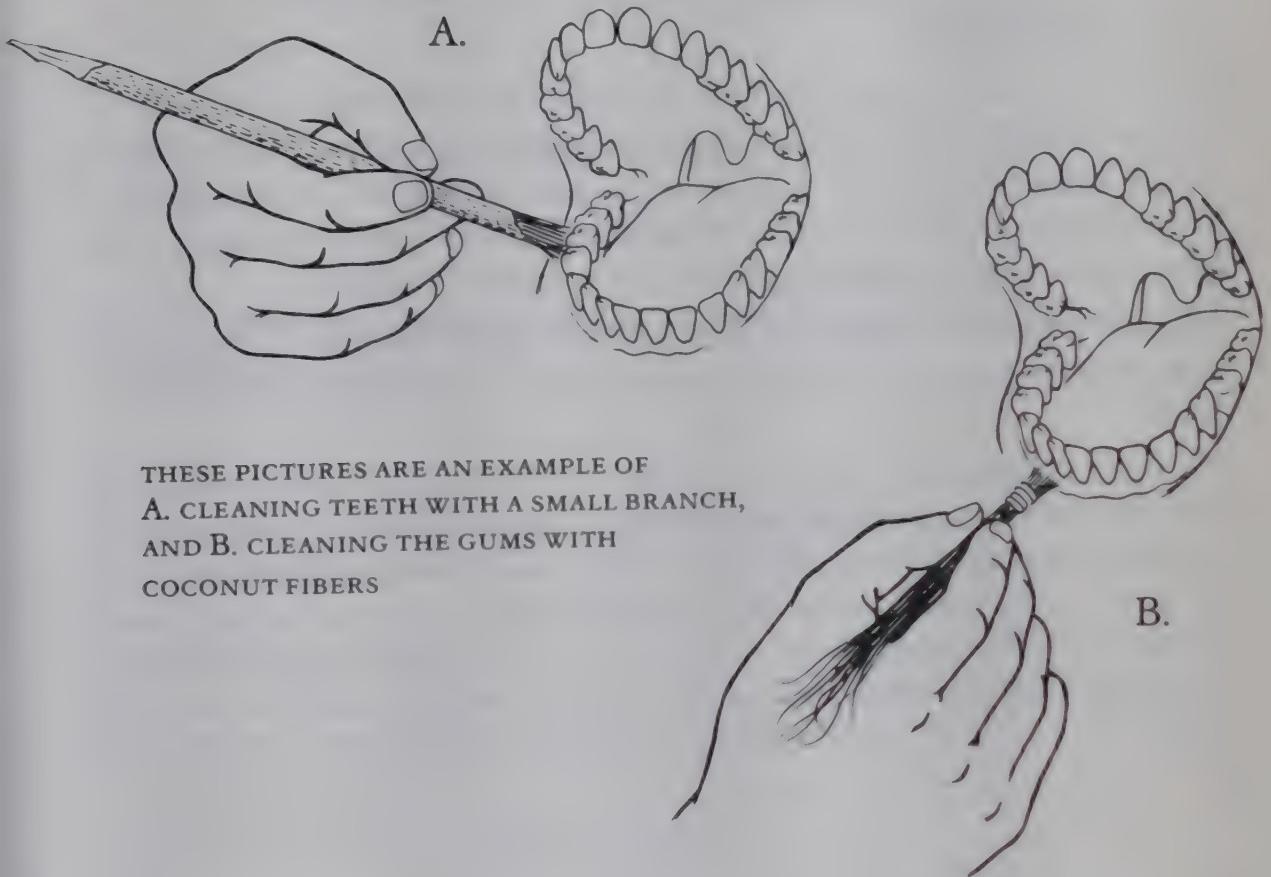
On the sides of teeth near the gums

Between the teeth

You do not need a special toothbrush. You can make a brush from local

materials like a small branch, a young bamboo, or fibers of a coconut. Make sure you do not use a branch that is poisonous.

Toothpaste is not necessary. Clean water and a brush can clean your teeth.



THESE PICTURES ARE AN EXAMPLE OF  
A. CLEANING TEETH WITH A SMALL BRANCH,  
AND B. CLEANING THE GUMS WITH  
COCONUT FIBERS

After you clean your teeth and gums with a brush, you should rinse your mouth with water. Rinsing gets rid of the bits of food that you have brushed out. Teeth and gums should be cleaned at least once a day before you go to sleep. Food left on the teeth during the night may start tooth decay or gum disease. If possible, clean your teeth or rinse your mouth with water after every time you eat.

A mother should clean her baby's first few teeth with a soft cloth. After one year, the mother should clean her baby's teeth with a soft brush. As the child grows, the mother should help her child clean his teeth. She should also check his teeth after he cleans them himself. By the time the child is six to seven years old, he can properly clean his teeth himself.

#### 4.4 SHARING IDEAS ABOUT DENTAL CARE IN THE COMMUNITY

As a health worker, you can help prevent many dental problems in the community. You should share ideas you have learned in this unit with the community. You should explain what you have learned to parents of young children. Teach children what foods to eat and how to keep their teeth clean. You should also teach this to children at schools.

You can only teach other people if you set a good example. Take care of your teeth properly. Get your family to do all the things you teach others to do.

You can also build on the ideas people already believe and help them to take care of their teeth and gums. For example, just as people use local materials to make household things, they can use local materials to make a brush for cleaning their teeth. Just as sweeping the house keeps it clean, brushing the teeth keeps them clean and healthy. Show parents how to help their children brush their teeth just as parents help children do other things.

## REVIEW EXERCISE

### **Dental Care in the Community**

1. List two causes of dental health problem.
  
  
  
2. List foods that are good for teeth and gums and foods that are bad for teeth and gums.
  
  
  
3. What local materials can you use to make a brush to clean teeth and gums?
  
  
  
4. Develop a community education presentation on dental care for one of these groups:  
A group of mothers with young children  
A group of children at a school  
A group of adult men and women
  
  
  
5. Use the skill checklist you developed in Unit 3 to evaluate the dental health presentations given by other students in the classroom.

## *Unit 5*

# **Assessing Patients with Dental and Mouth Problems**

## **STUDENT GUIDE**

### **OBJECTIVES**

1. Recognize, describe, and explain:

Color of the teeth, gums, and mucous membranes  
Cavities of the teeth  
Color, size, shape, and location of lesions in the mouth  
Bleeding of gums at the base of the teeth  
Swelling of gums, cheek, or jaw  
Loose teeth  
Pain or discomfort when palpating the teeth or gums  
Pain when tapping a tooth  
Tender or hard mass inside the mouth  
Tender and enlarged lymph glands in the neck  
Foul odor from the mouth

2. Identify signs of abnormal tooth and mouth conditions.
3. Interview a patient about his tooth or mouth problem.
4. Use proper procedures in examining a patient's tooth or mouth problems.
5. Record your findings on official forms in the recommended way.

### **LEARNING ACTIVITIES**

1. Learning about dental and mouth problems through discussions and presentations by the instructor.
2. Viewing pictures of the anatomy and physiology of the teeth and mouth and of associated problems.

3. Practicing how to question people about their dental and mouth problems.
4. Observing patients and studying pictures to learn the differences among the signs of tooth and mouth problems.
5. Interviewing and examining patients and recording findings.

## 5.1 HISTORY OF A DENTAL OR MOUTH PROBLEM

When a person comes to you with a dental or a mouth problem, you should first ask whether it involves his teeth, his gums, or his mouth. If the patient complains of a toothache, ask:

*“How Long Have You Had the Toothache?”*

The patient's answer will give you an idea about the seriousness of the problem. If he says he has had the toothache for several days or weeks, you should suspect an abscess. If there is an abscess and the pain is strong, you may have to remove the tooth. However, if this is the first time the tooth has hurt him, and if it has only hurt for a short time, you may only have to treat a cavity.

*“Where is the Pain?”*

An abscess causes pain in the cheek, under the jaw, and in the tooth that has decayed. Cavities cause local tooth pain. You should note each tooth that gives the patient pain.

*“What Is the Pain Like?”*

Cavities in teeth cause a mild pain. Sometimes this pain grows sharper when the person eats food that is sweet, food that is hot or cold, or food that has acid. Large cavities cause more pain than small cavities. At first, an abscess causes throbbing pain. As the abscess grows, the pain becomes sharper and more constant.

*“Does Anything Make the Toothache Worse?”*

Sucking cold air over a large cavity causes pain. Sweet, acid, hot, or cold foods can make small cavities hurt. If the patient has an abscess, tapping the tooth will cause intense pain.

*“Does Anything Make the Tooth Begin to Ache?”*

Sweet foods, acid foods, hot foods, and cold foods can make a decaying tooth begin to ache.

*“Does the Toothache Last All Night?”*

If pain awakens the patient at night or does not let him sleep, the tooth probably is badly decayed or abscessed. The tooth may have to be removed.

### *"Does Anything Make You Feel Better?"*

You can only treat the symptoms of canker sores and help relieve the pain so the patient will eat. Consider what the patient tells you. His way may be as good as any you can tell him.

## 5.2 PHYSICAL EXAMINATION FOR TOOTH AND MOUTH PROBLEMS

Seat your patient in a chair before you begin your examination.

### *Note the Color of Your Patient's Teeth*

Cavities, which come from tooth decay, appear as black spots. Tartar, which forms when teeth are not cleaned, appears as hard, brown matter on the teeth.

### *Note the Color of Your Patient's Gums*

Red and swollen gums are a sign of gingivitis, an inflammation of the gums where they meet the teeth.

### *Note Any Lesions and Where They Are Found*

Flat, shallow lesions may be found on the mucous membrane inside the mouth. Canker sores are flat, shallow lesions with red edges. A thin membrane covers the canker sores. You should note the color, size, shape, and location of lesions. Note whether they are all over the mouth or only in one area. Gingivitis lesions occur on the gums where they meet the teeth.

### *Note Any Bleeding*

Gingivitis will make gums bleed. You may find bleeding from gingivitis where your patient's gums and teeth meet. A gentle touch of gums inflamed by gingivitis may make them bleed.

### *Note Any Swelling*

Gingivitis and other gum problems commonly cause swelling. If your patient complains of pain in a tooth, you should check the gums around that tooth. Swelling around a tooth is a sign of an abscess.

*"Has the Same Tooth Ached Before?"*

Eating some foods will cause a tooth to ache for a short while. The pain will go away until the person eats those foods again or until the decay increases and the cavity grows larger.

*"Have You Had a Fever or Any Swelling of the Gums or Jaw?"*

An abscess can cause fever and swelling of the jaw, cheek, or gums.

*"Are You Allergic to Any Medications?"*

Make sure your patient understands this question. You know what an allergic reaction is, but your patient may not. Many people are allergic to drugs used in treating dental and mouth problems.

If your patient complains of sores in his mouth or of sore gums, ask:

*"How Long Have You Had This Problem?"*

Canker sores, which are tiny ulcers inside the mouth, last from one to three weeks. If a patient's canker sore lasts longer than three weeks, you should refer him to a clinic for more examination. Gingivitis, which causes sore and bleeding gums, may last for years.

*"Do You Brush Your Teeth?"*

Regular care of teeth prevents gingivitis and tooth decay. If your patient does not brush his teeth every day, you should tell him why brushing is important. You should also show him how to properly brush his teeth.

*"What Kinds of Food Do You Eat?"*

Some foods will irritate canker sores and make them worse. Rough foods, nuts, chocolate, and citrus fruits are foods that can make canker sores larger or more painful. A patient with gingivitis, or sore gums, may suffer pain when he eats certain foods. But he must have a balanced diet to get well again. You will have to tell him what easy-to-eat local foods will help his gums heal.

*"Do You Have Other Related Problems?"*

Problems related to sore gums will give you an idea of how severe the patient's problem may be. If the patient has bleeding gums, fever, trouble swallowing, bad breath, or enlarged lymph glands, he may have acute ulcerative gingivitis, a serious stage of gum problems.

Canker sores and other lesions in the mouth may also cause swelling. Check the cheek and jaw for swelling, too. An abscessed tooth will make a person's cheek and jaw swell.

Examine the patient's teeth and mouth by palpation, or touching and feeling.

#### *Note Any Loose Teeth*

Lightly push your patient's teeth back and forth. Note any loose tooth. Write down exactly which tooth is loose.

#### *Note Any Pain During Palpation*

Palpate, or examine by touching, all the patient's teeth. Watch for any sign of pain. Ask your patient to point to any tooth that caused him pain when you touched it. An abscess can cause pain in a tooth when you touch it.

Gingivitis will make a person's gums sore. Palpate your patient's gums. Note where he feels pain. Look for signs of swelling and redness.

Canker sores will hurt when you touch them. Note any lesions which are red and sore.

#### *Note Any Pain Caused by Tapping On a Tooth*

An abscess will cause severe pain if you tap the affected tooth.

#### *Note Any Hard or Tender Masses*

Palpate both inside and outside the mouth. If you feel any hard or tender mass near a tooth, look for an abscess. You may also find hard or tender masses on the cheek or jaw. These are other signs of an abscess.

Infection in the mouth or infected teeth will make the lymph glands in the neck large and tender.

#### *Note Any Foul Odor from the Patient's Mouth*

Infection of teeth or mouth causes foul smelling breath.

## REVIEW EXERCISE

### Assessing Dental and Mouth Problems

1. Read the symptoms of dental or mouth problems listed in the three typical cases below. In the box beside each case, write the problem you would expect to find when you examine the patient.

SYMPTOMS	PROBLEM YOU WOULD SUSPECT
a. The patient has had a constant, throbbing pain for the past week. The pain is in the back of his mouth, around a molar. His cheek and jaw throbs. He tells you, "I feel as if my head is splitting open." He has had a fever.	
b. The patient has had a toothache on and off for two days. He points to one tooth which causes the pain. He says eating candy and drinking hot tea makes the pain worse. He was eating candy when the pain began.	
c. A mother brings her young son to you. She says his gums have been bleeding during the past month. The boy has not injured his mouth. He does not brush his teeth. He does not eat fruit. His gums are sore.	

2. Write the two best ways to prevent problems of the teeth and mouth.

- a.
- b.

# SKILL CHECKLIST

## Assessing Dental and Mouth Problems

This checklist has two purposes.

- 1) Students should use it as a guide for checking their own skills or other students' skills.
- 2) Supervisors should use it when they evaluate how well students assess patients with dental and mouth problems.

After observing a student, enter a rating in the appropriate column.

Rating: 1 = Inadequate  
2 = Needs improvement  
3 = Satisfactory  
4 = Above average

When you assess patients  
with dental or mouth problems,  
look for:

YES   NO   RATING   COMMENTS

1. Abnormal color of the teeth, gums, or mucous membranes of the mouth				
2. Cavities of the teeth				
3. Color, size, shape, and location of lesions in the mouth				
4. Bleeding of the gums at the base of the teeth				
5. Swelling of the gums, cheek, or jaw				

	YES	NO	RATING	COMMENTS
6. Loose teeth				
7. Pain or discomfort when palpating the teeth or gums				
8. Pain when tapping a tooth				
9. Tender or hard mass inside the mouth				
10. Tender and enlarged lymph gland in the neck				
11. Foul odor from the mouth				

Obtain the following historical information about dental and mouth problems:

	YES	NO	RATING	COMMENTS
1. Presenting complaint				
2. Onset				
3. Duration				
4. Previous history				
5. Location of problem				
6. Aggravating factors				
7. Relieving factors				
8. Type of pain				
9. Recent trauma				
10. Pain at night				

	YES	NO	RATING	COMMENTS
11. Related symptoms				
12. Patient's allergy to medications				
13. Whether teeth are regularly brushed				
14. Types of food eaten				

Examine the teeth and mouth of a seated patient, then comment on:

	YES	NO	RATING	COMMENTS
1. Color of the teeth				
2. Color of the gums and mucous membrane of the mouth				
3. Size, shape and color of lesions				
4. Distribution of lesions				
5. Bleeding				
6. Swelling				

While palpating teeth and mouth, check for:

	YES	NO	RATING	COMMENTS
7. Loose teeth				
8. Pain or discomfort				
9. Hard or tender masses				
10. Foul odor from the mouth				

# *Unit 6*

## **Dental and Mouth Problems**

### **STUDENT GUIDE**

#### **OBJECTIVES**

1. Describe the symptoms and signs of:
  - Canker sores
  - Gingivitis
  - Acute ulcerative gingivitis
  - Tooth decay
  - Dental abscess
2. Interview and examine patients for dental and mouth problems.
3. Show proper ways to clean teeth, scale teeth, give a dental anesthetic, put in a temporary dental filling, and extract a tooth.
4. Give patients and their families instructions on caring for and preventing dental and mouth problems.

#### **LEARNING ACTIVITIES**

1. Learning about dental and mouth problems through discussions and presentations by the instructor.
2. Studying and discussing pictures which show the signs associated with dental and mouth problems.
3. Using case studies to practice diagnosing dental and mouth problems.
4. Receiving clinic instructions, then demonstrating and practicing:
  - Identifying dental and mouth problems
  - Providing dental and mouth treatment and care

Giving patients instructions on the care and prevention of dental and mouth problems

Scaling teeth

Giving anesthetic

Applying a temporary dental filling

Extracting a tooth

5. Students will have three days of practice in a clinic.

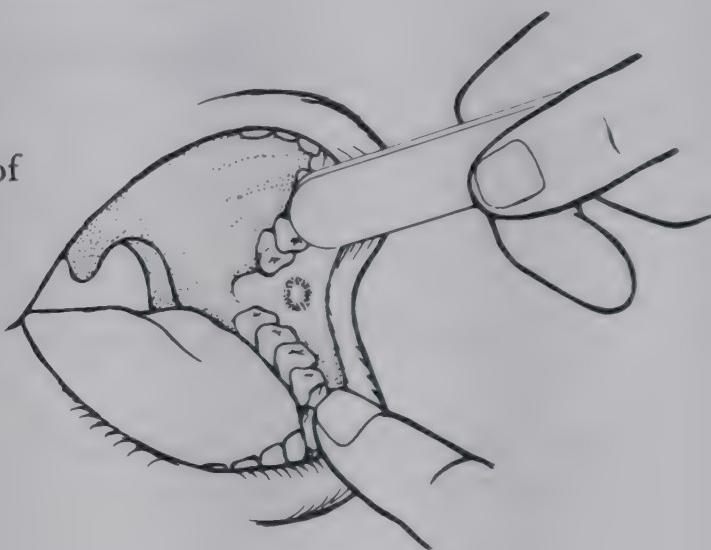
## 6.1 CANKER SORES

Canker sores are painful ulcers that develop on the mucous membranes of a person's mouth. Foods such as chocolate, nuts, and sour fruits sometimes make the canker sores appear, but they occur at other times as well. No certain cause of canker sores is known.

### CLINICAL PICTURE

#### a. Presenting complaint

The patient complains of a very painful *sore inside his mouth*.



#### b. Medical history

Canker sores develop quickly. They last from one to three weeks and heal without leaving a scar. People who have had canker sores in the past usually will get them again.

#### c. Physical examination

The canker sore is a *flat, white ulcer* on the mucous membrane of the mouth. Its *edges are red*. It may be between 2 mm and 10 mm wide. Several canker sores may occur at the same time. Pull the patient's cheek away from his teeth to check all the inside surface of his mouth for canker sores.

### COURSE AND COMPLICATIONS

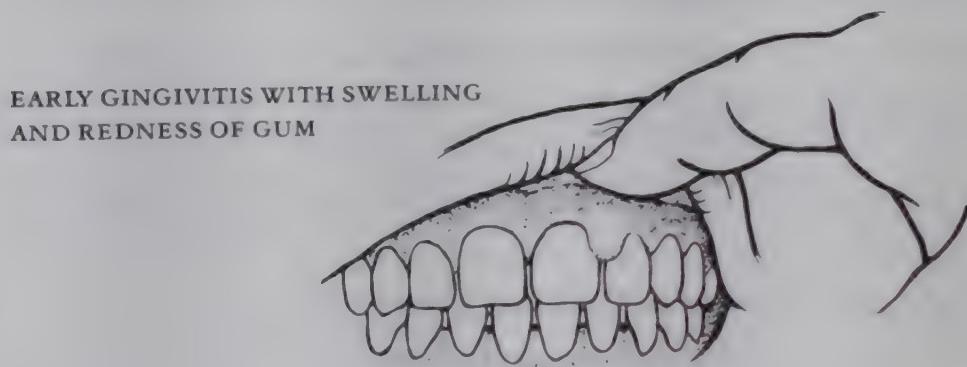
Canker sores heal on their own, but they often reoccur.

### PATIENT CARE

Tell the patient to avoid chocolate, nuts, and sour foods that irritate ulcers of the canker sore. There is no effective treatment or prevention.

## 6.2 GINGIVITIS

Gingivitis is an inflammation of the gums which leads to loss of teeth. If you do not regularly brush your teeth and rinse your mouth, bits of food will collect between your gums and teeth. Bacteria attack the bits of food, forming hard plaque. This plaque, or tartar, irritates your gums. The part of your gums which holds your teeth, the gingiva, becomes red and swollen. The red and swollen gingiva easily starts to bleed. This is gingivitis. Gingivitis pulls the gums away from the teeth. In time, the bone and fibers that hold the teeth in place weaken, and the teeth fall out.



### CLINICAL PICTURE

#### a. Presenting complaint

The patient with gingivitis will often complain of a toothache or other dental or mouth problems. He may also tell you he has **painful or bleeding gums**.

#### b. Medical history

Gingivitis occurs after years of poor care of teeth and mouth. The patient with gingivitis probably does not brush his teeth. He may tell you that brushing his teeth hurts him. Poor diet, alcoholism, and chronic diseases can make gingivitis more severe.

#### c. Physical examination

Healthy gums look pink. They fit tightly against the teeth. But gingivitis irritates the gums, making them look red and swollen. You will see space between the teeth and gums. The gingiva at the

top of the gums may bleed easily. You will often see food particles between the teeth and gingiva. You will also see hard plaque, or tartar, on the teeth.

### COURSE AND COMPLICATIONS

People lose more teeth because of gingivitis than any other reason. With gingivitis, a person's gums pull away from his teeth. The bone that holds the teeth breaks down. The teeth become loose and fall out.

### PATIENT CARE AND PREVENTION

- a. Remove the hard plaque, called tartar, from the teeth with a scaling tool, if one is available.
- b. Tell the patient how to properly brush his teeth. Before he leaves, have him try what you have shown him.
- c. Tell the patient to rinse his mouth out after each meal, or three times a day. He should use equal amounts of water and 3% hydrogen peroxide. He should continue using the solution for one week.
- d. Tell the patient to have his teeth examined regularly for signs of dental decay.
- e. Promote good dental hygiene in the community.

### 6.3 ACUTE ULCERATIVE GINGIVITIS

Acute ulcerative gingivitis is less common than gingivitis but much more severe. The gums become severely inflamed. You will see dead tissue on them. Acute ulcerative gingivitis may occur because of poor care of teeth and mouth, alcoholism, poor diet, or illness.

#### CLINICAL PICTURE

##### a. Presenting complaint

The patient with acute ulcerative gingivitis has **severe pain**. His **gums bleed**. He has a **fever** and trouble eating.

##### b. Medical history

The patient may tell you of related problems such as alcoholism, serious illness, poor diet, or poor mouth care.

### c. Physical examination

Lymph glands in the patient's neck are often enlarged. His gums will be very red and swollen. The top part of his gums, the gingiva, will bleed. Ulcers form on the gums at the teeth. You will find plaque, or tartar, on his teeth and other signs of poor tooth and mouth care. You may also smell an extremely foul odor from the infection and decay. In general, the patient appears more sick than a patient with gingivitis.

### COURSE AND COMPLICATIONS

Without treatment, a person with acute ulcerative gingivitis will develop chronic gingivitis and lose his teeth. Because eating is difficult, the person with acute ulcerative gingivitis does not eat enough good food, and his health suffers.

### PATIENT CARE AND PREVENTION

- a. Follow the same patient care steps as for gingivitis.
- b. Give the patient an antibiotic. To be sure of effective treatment, give procaine penicillin, IM, daily for five days. Or give oral penicillin tablets four times a day for five days. See Patient Care Guides.
- c. Clean away dead gum tissue. Swab gums with a cotton-tipped applicator soaked in 3% hydrogen peroxide solution.
- d. Promote good dental and mouth care in the community.

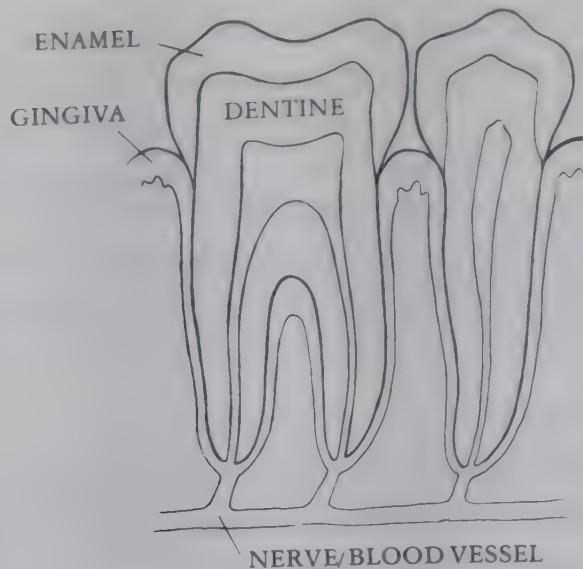
## 6.4 TOOTH DECAY

Poor dental hygiene, not brushing your teeth or cleaning your mouth, causes more tooth decay than anything else. Foods, especially sweet foods and candy, stick to your teeth when you eat. If you do not brush food off your teeth and wash it from your mouth, germs will attack it. Germs attacking food on your teeth make an acid. The acid eats a hole in the surface of the tooth. The hole grows larger and deeper, reaching a nerve. When the hole exposes a nerve, the tooth aches. A tooth with severe decay or infection must be pulled out.

### CLINICAL PICTURE

#### a. Presenting complaint

Small holes from tooth decay cause no pain. Only when the holes



grow deeper and expose a nerve does the patient feel discomfort. Toothaches occur when an exposed nerve becomes infected.

#### b. Medical history

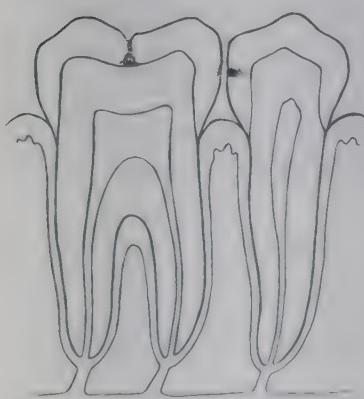
When tooth decay exposes a nerve, the first symptom may be pain. The pain will come when the person eats something very hot or very cold. Sweet and acid foods will also cause pain in a decayed tooth.

#### c. Physical examination

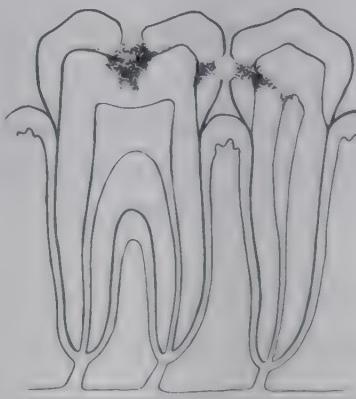
Identify the painful tooth. The decay will look like a dark spot on the surface of the tooth.

### COURSE AND COMPLICATIONS

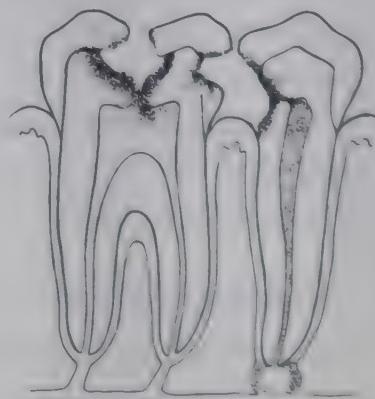
Once started, tooth decay will continue to grow until it is treated. Decay will expose a nerve and kill it. Then the tooth will change color. If the decay reaches to the root of a tooth, it can cause an abscess. An abscess can cause pain, fever, and swelling of the jaw. The patient will not be able to eat or sleep properly until the problem is controlled.



EARLY DECAY



DECAY REACHES  
THE NERVE



DECAY WITH  
ROOT ABSCESS

## PATIENT CARE

- a. If possible, refer the patient to a dentist.
- b. Give the patient aspirin for his pain.
- c. If you cannot refer a patient to a dentist, identify the exact tooth causing the pain:

Tell the patient to suck air in over the painful tooth. Ask whether this makes the pain worse.

Ask whether sweet, hot, cold, or acid foods make the tooth hurt.

Tap the tooth with a metal instrument to see if it causes pain.

- d. If tapping on the tooth causes pain, do not fill the tooth.
- e. If tapping on the tooth does not cause pain, put in a temporary filling. See Patient Care Procedures. Put temporary fillings only in teeth that still have live nerves.

## PREVENTION

- a. Show the patient with dental problems how to clean his teeth and mouth. Ask him to demonstrate the method.
- b. Examine the patient for signs of gingivitis.
- c. Include tooth and mouth care lessons in school health programs.
- d. Tell parents and children how sweet foods and candy can hurt teeth.

## 6.5 DENTAL ABSCESS

Untreated tooth decay will eat its way to the nerve of a tooth. The decay infects the nerve and kills it. The infection can then spread down the nerve through the root of the tooth to the bone of the jaw. This deep infection of the tooth is an abscess.

### CLINICAL PICTURE

- a. Presenting complaint

The patient will complain of *severe, continuous pain* in one tooth. The infected tooth will be loose and painful when you touch it. The patient may have a *fever*.

**b. Medical history**

At first, an abscess causes throbbing pain. This throbbing pain will start and stop. Heat and cold and food that is sweet or acid will increase the pain. In time, the pain becomes constant. You may find swelling of the gums. An entire side of the face may become swollen.

**c. Physical examination**

The infected tooth may be loose and very painful when tapped. The gums, jaw, or face may be swollen. An abscess may appear under the gum near the tooth. If the abscess drains, the symptoms will be less painful.

**COURSE AND COMPLICATIONS**

Without treatment, the abscess may infect the jawbone.

**PATIENT CARE**

- a. Check for swelling near the tooth.
- b. If you see no swelling, but the tooth is decayed and hurts the patient when you tap it, take out the tooth. See Patient Care Procedures.
- c. If you see swelling, you must treat the swelling before you take out the tooth. To treat swelling, give procaine penicillin, IM, once each day for five days. Give aspirin for pain. See Patient Care Guides. Show the patient how to reduce swelling by applying warm, wet compresses.
- d. When swelling has gone down, take out the tooth. See Patient Care Procedures.

**PREVENTION**

- a. Check the patient's teeth for signs of other decay.
- b. Check the patient's gums for signs of gingivitis.
- c. Show the patient how to clean his teeth and gums. Make sure he understands. Have him demonstrate the method.
- d. Include tooth and mouth care lessons in school health programs.

## REVIEW QUESTIONS

### Canker Sores

1. A ten-year-old boy's parents bring him to your clinic. The boy complains of painful sores in his mouth. You find flat, shallow ulcers scattered inside his mouth. The ulcers have red edges. You find no other sign of trouble. What would you tell the boy and his family?
  
2. The boy who was your patient in Question 1 comes back to your clinic six weeks later. He still has painful sores inside his mouth. He has also lost weight because eating hurts him. Now what would you do for the boy?
  
3. What causes canker sores? Choose the correct answer.  
 a. No cause has been proven.  
 b. Drinking fluids.  
 c. Many different foods.

## **REVIEW QUESTIONS**

### **Gingivitis**

1. What is the most common cause of gingivitis? (Choose the correct answer.)  
 a. Viral infection  
 b. Poor diet  
 c. Poor mouth hygiene
  
2. What is the major complication of gingivitis? (Choose one answer.)  
 a. Dental decay  
 b. Loss of teeth  
 c. Dental abscess
  
3. Describe the treatment for gingivitis.

## **REVIEW QUESTIONS**

### **Acute Ulcerative Gingivitis**

1. Acute ulcerative gingivitis is a more serious infection of the gums than gingivitis. Explain the difference between the clinical pictures of the two problems.
  
2. When you treat a patient for acute ulcerative gingivitis, you would first follow the steps for treating gingivitis. What other treatment would you then give a patient with acute ulcerative gingivitis?

## **REVIEW QUESTIONS**

### **Tooth Decay**

1. What is the main cause of tooth decay?
  
2. If a dentist is not available, how would you treat tooth decay?
  
3. A complication of tooth decay is \_\_\_\_\_.

## **REVIEW QUESTIONS**

### **Dental Abscess**

1. Explain how a dental abscess forms.
  
2. A thirty-year-old woman comes to your clinic. She complains of a severe toothache. She has had the toothache for three days. Her temperature is  $38.8^{\circ}\text{C}$ . The left side of her face has swollen. She cannot open her mouth because of the pain. Use the Patient Care Guides to write what you would do for this woman.
  
3. \_\_\_\_\_ is a complication of a dental abscess.

## **REVIEW QUESTIONS**

### **Scaling the Teeth**

1. You scale teeth to remove tartar which accumulates below the gum.  
Why should you remove the tartar?
  
2. A scaling instrument has two ends, the spoon end and a point. Explain how you should use these to remove tartar.
  
3. How can you prevent tartar from forming on your teeth?

## **REVIEW QUESTIONS**

### **Local Dental Anesthetic**

1. List four times when you should not give a local anesthetic.
  - a.
  - b.
  - c.
  - d.

2. When a patient needs an upper front tooth removed, you should: (Check one answer.)
- a. Give one injection of anesthetic on the cheek side of the gum.
  - b. Give no anesthetic.
  - c. Give two injections of anesthetic, one on the cheek side and one on the tongue side of the gum.
3. When a patient needs a temporary filling of a lower front tooth, you should: (Check one answer.)
- a. Give one injection of anesthetic on the cheek side of the gum.
  - b. Give no anesthetic.
  - c. Give two injections of anesthetic, one on the cheek side and one on the tongue side of the gum.
4. You are about to inject a local anesthetic for a nerve block. You pull back the plunger of the syringe, but then you see blood enter the syringe.
- a. What does the blood mean?
  - b. What should you do?
5. List two ways to check whether a tooth is anesthetized.
- a.
  - b.

## REVIEW QUESTIONS

### Temporary Filling

1. You see a person who has had a toothache for three weeks. The tooth has a small brown spot on it. You tap the tooth, and the patient does not feel pain. The tooth is not loose. You cannot find any swelling around the tooth or face. What would you do for the patient?
  - a. Put in a temporary filling.
  - b. Remove the tooth immediately; give aspirin for pain.
  - c. Start on aspirin and penicillin; put in temporary filling.
2. When you put a temporary filling into a tooth, you must keep the tooth dry. Explain why.
3. Explain what you would use to make cement for a temporary filling. How would you make it?
4. List four things you should tell a patient about his temporary filling. Explain the importance of each.
  - a.
  - b.
  - c.
  - d.

## REVIEW QUESTIONS

### Tooth Extractions

1. A person complains of a toothache he has had for a week. His face is swollen near the aching tooth. His temperature is 38°C. The aching tooth has a hole in it. Tapping the tooth causes pain. How would you treat this patient?
  - a. Remove the tooth immediately.
  - b. Give him aspirin and send him home. Tell him to return in one week if he still has the toothache.
  - c. Give him aspirin for pain and start him on penicillin.
  - d. Put in a temporary filling.
2. A man complains of a toothache he has had for three days. He cannot sleep at night. You find the tooth very loose. Moving it causes severe pain. You cannot see any swelling of the face or gums around the tooth. He is not allergic to local anesthetic and does not have heart disease.
  - a. Remove the tooth immediately.
  - b. Give him aspirin and send him home. Tell him to return in one week if he still has the toothache.
  - c. Give him aspirin for pain and start him on penicillin.
  - d. Put in a temporary filling.
3. List five things you should tell a patient after removing his tooth.
  - a.
  - b.
  - c.
  - d.
  - e.

## REVIEW EXERCISE

### Case Study 5

Name of Patient: Bloom, Connie

Sex: Female

Date of Birth: 3 February 1952

Date of Visit: 12 April 1980

Urine: Negative

Vital Signs: Temperature 38.2° C

Pulse 80

Respirations 18

Weight 54 kg

Presenting Complaint and Medical History: The patient has pain and swelling in her lower left jaw. The symptoms began one week ago and they are growing worse. The pain is throbbing. Chewing or trying to open her mouth wide causes more pain. Aspirin gives temporary relief.

Past medical history includes nothing special to note.

Physical Examination: Patient looks distressed. The side of her face over her lower left jaw has swollen. Palpation of the jaw causes pain.

The patient's mucous membranes are pink. Her tongue is coated. Her tonsils cannot be clearly seen as she cannot open her mouth wide enough. The gum around her last lower left molar is swollen and red. The last lower left molar is tender to pressure. A large cavity is visible on top of the molar. The lymph glands on the left side of her neck are tender.

Patient's chest is normal. Her breath sounds normal. Her heart is normal. No edema is seen. Her abdomen is normal.

Study the information given above. Then answer these questions for discussion.

1. What is the diagnosis?

2. What information in the case study was most helpful to you when you made your diagnosis?
3. Use your Patient Care Guides to write what treatment you would give this patient.
4. What advice would you give to this patient and her family?

## SKILL CHECKLIST

### Scaling Teeth

This checklist has two purposes.

- 1) Students should use it as a guide for checking their own skills or other students' skills.
- 2) Supervisors should use it when they evaluate how well students scale teeth.

After observing a student, enter a rating in the appropriate column.

Rating: 1 = Inadequate  
2 = Needs improvement  
3 = Satisfactory  
4 = Above average  
5 = Excellent

When removing tartar from  
teeth:

YES NO RATING

COMMENTS

1. Collect equipment and materials				
2. Wash your hands with soap and water				
3. Tell the patient what you are going to do				
4. Use the spoon end of the scaling instrument on teeth				
5. Draw the spoon end from the root toward the crown of the tooth				
6. Remove all of the tartar				
7. Use the pointed end of the scaling instrument to remove tartar from between the teeth				

	YES	NO	RATING	COMMENTS
8. Scrape from the root to the crown of the tooth				
9. Have the patient rinse his mouth after you remove the tartar				
10. Show the patient how to brush his teeth				

# SKILL CHECKLIST

## Local Dental Anesthesia

This checklist has two purposes:

- 1) Students should use it as a guide for checking their own skills or other students' skills.
- 2) Supervisors should use it when they evaluate how well students give a local dental anesthetic.

After observing a student, enter a rating in the appropriate column.

Rating: 1 = Inadequate  
2 = Needs improvement  
3 = Satisfactory  
4 = Above average  
5 = Excellent

When giving a local dental anesthetic, you should:

YES NO RATING COMMENTS

1. Seat the patient in a chair with support for his head and good light					
2. Wash your hands with clean water and soap					
3. Tell the patient what you are going to do					
4. Identify the tooth to be anesthetized					
5. Ask whether the patient has any allergy to anesthetic. If the patient is allergic, stop. Do not continue					
6. Ask the patient about any history of a heart problem. If he has had a heart problem, stop. Do not continue					

	YES	NO	RATING	COMMENTS
7. Look for swelling near the tooth. If you see swelling, stop. Do not continue				
8. Assemble the necessary supplies and equipment. Sterilize a syringe and needles				

## Upper Teeth

YES NO RATING COMMENTS

9. Local infiltration anesthesia:				
a. On the cheek and lip side, hold back the cheek or lip tightly. The opening of the needle should face the bone. Insert the needle at the root of the problem tooth until you hit the bone				
b. Slowly inject 1 ml of anesthetic, taking thirty to sixty seconds. This is the only injection needed when anesthetizing upper teeth for a temporary filling.				
c. Before injecting anesthetic on the tongue side of the gums, warn the patient to expect a pinch. Tell him not to move his head.				
d. Inject only enough anesthetic to make the gum turn white				
e. Wait for five minutes, then test for anesthesia by pressing a sharp instrument against gum on both sides of the problem tooth and by tapping the tooth.				

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Lower Front Teeth	YES	NO	RATING	COMMENTS
<p>10. Local infiltration anesthesia:</p> <p>a. On the lip side, hold back the lip tightly. The opening of the needle should face the bone. Insert the needle at the root of the problem tooth until you hit the bone</p>				
<p>b. Slowly inject 1 ml of anesthetic, taking thirty to sixty seconds. This is the only injection needed to anesthetize the lower front teeth for a temporary filling</p>				
<p>c. On the tongue side, turn the needle so its opening faces the bone. Insert the needle at the root of the problem tooth until you hit the bone</p>				
<p>d. Inject .25 ml of anesthetic</p>				
<p>e. Wait for five minutes, then test for anesthesia by pressing a sharp instrument against the gum on both sides of the problem tooth and by tapping the tooth</p>				

**Lower Back Teeth (Molars,  
Pre-Molars, Canine)**
**YES NO RATING COMMENTS**

11. Mandibular block:					
a. Ask the patient to open his mouth as wide as possible					
b. Palpate with your index finger for the notch in the mandible behind the last molar					
c. Place the needle slightly toward the inside of the mouth just beside the middle of the fingernail of the index finger					
d. Push the cheek back tightly. The injection site is a slight dip exposed at the tip of the index finger					
e. The syringe is placed on the two premolars on the opposite side of the mouth					
f. Turn the opening of the needle toward the bone					
g. Insert the needle slightly, injecting a small amount of anesthetic					
h. Wait five to ten seconds, then slowly insert the needle until bone is struck. About three-fourths of the needle should be under the mucosa					

	YES	NO	RATING	COMMENTS
i. Aspirate to check for blood. If blood is present, withdraw the needle slightly and aspirate again. When no blood is present, slowly inject 1.5 ml of anesthetic, taking thirty seconds. This is the only injection required when anesthetizing a lower back tooth for a temporary filling				
j. If the tooth is to be extracted, on the cheek side of the second molar, inject .5 ml of anesthetic at the base of the tooth where the cheek and gum meet				
k. Wait five to ten minutes, then test for anesthesia by pressing a sharp instrument against the gum on both sides of the problem tooth. Ask the patient if his lower lip on the side of the problem tooth feels "heavy and fat"				
12. Repeat the procedure if the gum is not numb				

## SKILL CHECKLIST

### Temporary Filling

This checklist has two purposes:

- 1) Students should use it as a guide for checking their own skills or other students' skills.
- 2) Supervisors should use it when they evaluate how well students put in a temporary filling.

After observing a student, enter a rating in the appropriate column.

Rating: 1 = Inadequate  
2 = Needs improvement  
3 = Satisfactory  
4 = Above average  
5 = Excellent

When doing a temporary filling,  
you should:

	YES	NO	RATING	COMMENTS
1. Seat the patient in a chair with support for his head and a good light source				
2. Wash hands with clean water and soap				
3. Tell the patient what you are going to do				
4. Identify the exact tooth to be filled				
5. Ask the patient if he feels pain when you tap the tooth. If he feels pain, stop. Do not continue				
6. Check for a dental abscess with swelling around the problem tooth. If you see swelling, stop. Do not continue				
7. Assemble necessary supplies and equipment				

	YES	NO	RATING	COMMENTS
8. Tell the patient to rinse his mouth with warm water. Then place cotton under his tongue and on each side of the problem tooth to keep it dry				
9. Dry the problem tooth with cotton				
10. Clean all the decay from the tooth with a spoon instrument				
a. If the patient feels pain, do the procedures listed in the Local Dental Anesthesia Skill Checklist				
b. If the tooth starts to bleed from the cavity, stop. Complete a dental extraction procedure listed in the Dental Extraction Skill Checklist				
11. Replace cotton if it is wet				
12. Check your work with a mouth mirror to make sure all decay is removed				
13. Mix dental cement:				
a. Place three drops of eugenol liquid at one end of a clean glass				
b. Place three times as much zinc oxide powder at the opposite end of the glass				
c. Using a cement spatula, mix small amounts of powder with eugenol until it thickens and does not stick to the glass.				
14. Dry the tooth before applying cement				

	YES	NO	RATING	COMMENTS
15. Place a small ball of cement into the cavity with your finger or an instrument				
16. With zinc oxide powder on the tip of your instrument, tap the cement into all corners of the cavity. Fill the cavity to the top with cement				
17. Tell the patient to bite gently then move his mouth in all directions with his teeth together				
18. Allow the cement to dry for one to five minutes				
19. Remove extra cement with a carving instrument or the hooked end of a probe				
20. Remove all cotton from the patient's mouth				
21. Check whether the patient can close his mouth correctly. Scrape away excess cement				
22. Tell your patient:				
a. Not to drink or eat for one hour				
b. To avoid chewing on the side of the mouth with the filling for about twenty-four hours				
c. That this is a temporary filling and it will last for only one to six months				
d. To make an appointment with a dentist as soon as possible				

# SKILL CHECKLIST

## Dental Extraction

This checklist has two purposes:

- 1) Students should use it as a guide for checking their own skills or other students' skills.
- 2) Supervisors should use it when they evaluate how well students can pull out a tooth.

After observing a student, enter a rating in the appropriate column.

Rating: 1 = Inadequate  
2 = Needs improvement  
3 = Satisfactory  
4 = Above average  
5 = Excellent

When pulling a tooth you should:

	YES	NO	RATING	COMMENTS
1. Seat the patient in a suitable chair, with support for his head and a good light source				
2. Wash your hands with clean water and soap				
3. Tell the patient what you are going to do				
4. Identify the exact tooth to be pulled				
5. Be sure that the tooth cannot be saved. The tooth cannot be saved if it is loose, painful to touch, painful when tapped, if the pain awakens the patient at night, or if the cavity bled when you prepared it for a temporary filling				

YES NO RATING COMMENTS

	YES	NO	RATING	COMMENTS
6. Check for swelling around the problem tooth. If you see swelling, stop. Do not continue				
7. Assemble necessary supplies and equipment				
8. Complete anesthesia procedure listed in the Local Dental Anesthesia Skill Checklist				
9. Stand in the correct position for extracting an upper or lower tooth				
10. Separate the gum from the problem tooth with a spoon instrument				
11. With your index finger positioned on the straight elevator tip for good control, loosen the tooth				
12. Use the proper forceps for the tooth being extracted				
a. Upper dental forceps				
b. Lower dental forceps				
13. Place forcep beaks straight up and down on the tooth				
14. Push the forcep beaks down into the gum as far as possible				
Upper Front Teeth (Incisors and Canines)				
15. Push up on forceps. Slowly and firmly turn the forceps to the right and left. Repeat				

YES NO RATING COMMENTS

Upper Back Teeth (Molars and Premolars)				
16. Push up on the forceps, slowly and firmly moving the tooth back and forth from cheek side to tongue side. Apply more pressure in the cheek direction				
17. Extract the tooth in the direction of the cheek side				
Lower Front Teeth (Incisors and Canines)				
18. Push down on forceps, slowly and firmly moving the tooth back and forth from cheek or lip side to tongue side. Tell the patient to support his jaw with his fist				
19. Pull out the tooth in the direction of the cheek or lip side				
Lower Back Teeth (Molars)				
20. Push down on the forceps, slowly and firmly moving the tooth back and forth from cheek to tongue side. Ask the patient to support his jaw with his fist				
21. Extract teeth in the direction of the cheek side				
22. After the tooth is extracted: a. Check for broken roots				
b. If a root is broken, follow Patient Care Procedures				

YES NO RATING COMMENTS

	YES	NO	RATING	COMMENTS
c. Stop bleeding by packing the socket with cotton and telling the patient to close his teeth together				
23. Tell your patient:				
a. To keep his mouth closed tightly for one hour				
b. To chew on the opposite side of his mouth for three to five days				
c. That his mouth will be sore for the next few days. If the pain does not decrease each day, he should return				
d. To rinse socket with warm, salt water, starting the next day				
e. To continue brushing all his teeth as usual, but not to touch the empty socket with the toothbrush				
f. To return if he feels pain, a dry socket, or excessive bleeding				
24. Care for other complications by following Patient Care Procedures:				
a. Pain				
b. Dry socket				
c. Excessive bleeding				
d. Dislocated jaw				
e. Root of upper tooth pushed up into sinus				

## *Unit 7*

# **Assessing Patients With Ear, Nose, Sinus and Throat Problems**

### **STUDENT GUIDE**

#### **OBJECTIVES**

1. Recognize, describe and explain:

Loss of hearing

Color and smell of discharge from ear

Pain when the ear is pulled

Color and consistency of discharge from the nose

Color of mucous membranes inside the nose

Swelling of mucous membranes inside the nose

Severe pain in sinus above the eye or over the cheek  
when the sinus is tapped

Inflamed and swollen tonsils with exudate

Back of throat inflamed

Swollen epiglottis

Foreign body in the ear, nose, back of throat, or on  
the tonsil

Swollen and painful lymph glands below the ear, jaw,  
or in front of the neck

2. Identify signs of ear, nose, sinus, and throat problems.
3. Interview a patient about his ear, nose, sinus, or throat problem.
4. Use proper procedures in examining a patient's ear, nose, sinus, or throat.
5. Record your findings on official forms in the recommended way.

## LEARNING ACTIVITIES

1. Learning about ear, nose, sinus, and throat problems through discussion and presentations by the instructor.
2. Viewing slides on the anatomy and physiology of the ear, nose, sinus, and throat and on related problems.
3. Practicing how to question people about ear, nose, sinus, and throat problems.
4. Observing patients and studying pictures to learn about the differences among the signs of ear, nose, sinus, and throat problems.
5. Interviewing and examining patients and recording findings.

## 7.1 HISTORY OF AN EAR, NOSE, SINUS OR THROAT PROBLEM

When a patient comes to you with a problem of the ears, nose, or throat, you should first ask questions.

When a patient complains of a common cold, ask:

*"Have You Had a Fever? Runny Nose? Cough? Sneezing?"*

Have the patient tell you all of the signs and symptoms of his problem. Ask him about such things as fever, cough, runny nose, and sneezing.

*"How Long Have You Had the Cold?"*

A viral cold, or upper respiratory infection, lasts three to ten days. If the symptoms last longer, you should think about complications such as acute otitis media, acute bacterial tonsillitis, sinusitis, bronchitis, or pneumonia.

*"When Did the Symptoms Start?"*

If the presenting signs and symptoms sound like a complication of an upper respiratory infection, ask the patient if all these symptoms were present when the cold started. If the symptoms last for more than five days, you should think of bacterial complications.

*"Do Others in the Family Have this Problem?"*

An upper respiratory infection spreads easily to other members of the family. You should tell the family how to avoid catching it.

*"Do You Have a High Fever or Swollen Glands?"*

High fever and swollen glands are complications of a common cold. Usually you should treat with antibiotics.

*"Do You Have Difficulty Swallowing?"*

Difficulty swallowing because of a sore throat may be a sign of acute bacterial tonsillitis. You will treat viral and bacterial tonsillitis very differently.

***“Does Your Ear Ache? Has Your Ear Ached Since Your Cold Started?”***

Feelings of fullness in the ear and severe pain are signs of an acute otitis. If pain is present, it is probably an acute otitis media, or the start of one. If the patient has pain at the beginning of a cold but does not have pain now, his ear drum may have burst. The fluid from acute otitis media builds pressure behind the ear drum. When the pressure becomes too great, the ear drum breaks. When the ear drum breaks, the painful pressure is gone. The fluid drains out of the ear.

***“Has Any Fluid Drained From Your Ears? How Long Has It Drained?”***

If the patient’s ear was painful but now has begun to drain fluid, his ear drum probably has burst. The pressure of fluid that builds from acute otitis media can burst an ear drum.

Fluid that drains from an ear may be clear, white, or yellow. Clear fluid comes from an acute otitis media. White or yellow fluid drains from chronic otitis media or an external otitis.

Otitis is chronic when fluid has drained from an ear for two weeks or more.

***“Does Fluid From the Ear Smell Bad?”***

Fluid from chronic otitis media smells foul. The fluid will be the color of pus.

***“Have You Had Any Loss of Hearing?”***

Acute or chronic otitis media can cause a loss of hearing. Chronic otitis media can cause permanent loss of hearing.

***“Do You Have Headaches With Pain Over the Forehead or Cheeks?”***

Sinusitis causes headaches with pain in the sinus areas over the forehead or cheeks. The sinusitis may be viral or bacterial. If the patient has had a recent upper respiratory infection, the sinusitis probably is bacterial. Treat bacterial sinusitis with antibiotics.

***“Does Fluid Drain From Your Nose?”***

Clear fluid will drain from a viral upper respiratory infection. Yellow or green fluid will drain from bacterial sinusitis.

***“Do You Cough and Have Chest Pain?”***

An upper respiratory infection can spread to the lower respiratory

tract. Lower respiratory tract infections are bronchitis and pneumonia.

*"Do You Cough Up Any Mucous? What Color Is It?"*

A bronchitis cough usually does not have any mucous, unless it is bacterial. Yellow or green mucous comes up from a bacterial bronchitis cough.

A person with pneumonia will cough up yellow or green mucous. His cough will come from deep in the chest. Pneumonia also causes fever, chills, and general ill feeling.

When a patient complains of a foreign body in his nose, ears, or throat, ask him:

*"What is the Problem?"*

Write down what the patient tells you. Use the patient's own words. If your patient is a child, write down what the parent tells you.

If the parent saw a child put something in his nose or ears, write down exactly what it was. If you refer the child to a doctor, your note will help the doctor plan his treatment. Sometimes the parent cannot go to the doctor with the child. Then your note will be especially important.

*"How Long Have You Had the Problem?"*

If the problem has lasted for a few days, check for fluid. Foul smelling fluid draining from a nostril could mean a foreign body is stuck in the nose.

*"Have You Done Anything About the Problem?"*

Ask whether anyone has tried to remove the foreign body from the nose, ear, or throat. Attempts to remove the foreign body may have caused swelling and irritation. Because of the swelling, you may not be able to see the foreign body. Refer the patient to a hospital.

*"Did You See the Child Put Something in His Ear, Nose, or Throat?"*

The signs and symptoms of a foreign body in the ear, nose, or throat depend on the size and shape of the foreign body. You should find out from the child or his parent what foreign object was put in the ear, nose, or throat. You should also find out how long it has been there.

## 7.2 PHYSICAL EXAMINATION FOR AN EAR, NOSE, OR THROAT PROBLEM

When a patient comes to you with any ear, nose, or throat problem, you should examine all three areas. This way you will not overlook any related symptom. Also, examine every patient the same way. If you examine every patient the same way, you will not forget any important step.

### *Inspect and Palpate the Skin*

You can quickly examine the skin of the scalp, face, and neck as you begin your examination of the ears, nose, and throat. Use both hands to palpate the scalp. Then use the flat parts of your fingers to feel the areas behind the ears and the back of the neck. Use the tips of your fingers to feel for masses below the ears and in the front of the neck and below the jaws.

Most children have small, firm lymph glands in their necks. During acute infections, the lymph glands grow and become tender. A large, painless swelling in the neck may indicate tuberculosis in children.

### *Inspect the Ears*

If your patient complains about his ears, first check his hearing. You can use a wrist watch for adults, whisper words for children, or crumple a piece of paper for infants. Cover the ear not being checked.

To check hearing with a wrist watch, first listen to it yourself to see how far from your ear you can hear it. Then hold the watch that far from the patient's ear. Move it closer, if necessary. See if your patient can hear better with one ear than with his other.

You can also check an adult's or child's hearing by whispering a word at about arm's length from his ear. Do not let the patient see your lips. Ask him to repeat each word you say.

To check an infant's ear, use a piece of paper. Seat the infant on your lap so he faces away from you. When he is not looking, crumple the paper behind him. See if he turns his head in that direction.



You should check hearing in both of your patient's ears. See if he can hear better from one ear than the other.

Now inspect the ears. Look for any sign of discharge. Note the color and smell of any discharge. In chronic ear infections, foul-smelling fluid drains from the ears. Look for any sign of a foreign body in the ear.

Pull on the outer ear. Now push on the flap of skin in front of the ear. If these tests cause pain, the patient may have an external ear infection.

#### *Examine the Nose and Sinuses*

Use a nasal speculum to look into each nostril. Note any nasal discharge. Patients with upper respiratory infections have white to yellow nasal discharge. Patients with allergies have clear nasal discharge.

Look at the mucous membranes of the nose. They should appear healthy and pink. In infections, they may be red or very pale and swollen.

Check for tenderness in the sinuses. Gently tap the patient over each eye and over each cheek. This should cause little discomfort.

However, tapping the sinuses of a patient with a sinus infection causes severe pain. Severe pain in the sinuses is a sign of acute sinusitis. See Figure on page 136 for location of sinus areas.

### *Examine the Throat*

Examination of the throat involves a careful search for dental disease as well as other problems in the mouth. See Unit 5, Assessing Patients with Dental and Mouth Problems, for a description of the examination of the mouth and teeth.

After checking the mouth and teeth, look at the back of the throat. Find the soft, tonsillar tissue. Children often have enlarged tonsillar tissue. This is normal. But when the tonsils or tonsillar tissue becomes infected, the tissue grows red and swollen. You may see exudate, a fluid with pus, or infected tonsillar tissue. These are signs of acute tonsillitis. You should note the color of the pussy exudate on infected tonsillar tissue. Also, you should note whether the back of the throat is healthy pink or bright red.

While examining the throat, also look for foreign bodies in the back and on the tonsils.

## REVIEW EXERCISE

# Assessing Ear, Nose, Sinus, and Throat Problems

During a physical examination of the ears, nose, sinuses, and throat, you should identify and record abnormal findings. Examples of abnormal findings are listed below. Explain what each finding is a sign of.

FINDINGS	SIGN OF
<ul style="list-style-type: none"><li>a. You crumple a piece of paper behind a two-year-old baby. The baby does not turn to look at the paper.</li> <li>b. You are at arm's length from a four-year-old child. You ask him to repeat a word. The child does not respond.</li> <li>c. You examine a child whose ear has been draining for three weeks. The discharge has pus and is foul smelling.</li> <li>d. A patient feels severe pain when you tap the sinus over his left eye.</li> <li>e. Examining a patient's throat, you notice that the tonsils are red, swollen, and covered with pus.</li></ul>	

# SKILL CHECKLIST

## Assessing Ear, Nose, Sinus, and Throat Problems

This checklist has two purposes:

- 1) Students should use it as a guide for checking their own skills or other students' skills.
- 2) Supervisors should use it when they evaluate how well students assess patients with ear, nose, sinus, and throat problems.

After observing a student, enter a rating in the appropriate column.

Rating: 1 = Inadequate  
2 = Needs improvement  
3 = Satisfactory  
4 = Above average  
5 = Excellent

When you take a patient's medical history, you should obtain this information about ear, nose, sinus, and throat problems:

	YES	NO	RATING	COMMENTS
1. Presenting complaint				
2. Onset				
3. Duration				
4. Related family illness				
5. Related pain or fever				
6. Difficulty swallowing				
7. Related ear pain				
8. Related ear discharge				
9. Odor of ear discharge				
10. Hearing problem				
11. Headaches				
12. Pain over forehead or cheeks				

	YES	NO	RATING	COMMENTS
13. Related nasal discharge				
14. Cough related to chest pain				
15. Coughing up mucous				
16. Color of mucous				
17. Whether anyone saw the child put a foreign body in his ear, nose, or mouth				
18. Whether any treatment was given at home				

YES NO RATING COMMENTS

29. Severe pain in the sinus above the eye or over the cheek when tapped					
30. Tonsils that are red, swollen, or covered with exudate. Color and thickness of the exudate					
31. Red back of throat					
32. Foreign body on the tonsils or in back of the throat					
33. Enlarged and painful lymph glands in the front of the neck or below the jaw					

# SKILL CHECKLIST

## Examining a Child for Hearing Loss

This checklist has two purposes:

- 1) Students should use it as a guide for checking their own skills or other students' skills.
- 2) Supervisors should use it when they evaluate how well students examine a child's hearing.

After observing a student, enter a rating in the appropriate column.

Rating: 1 = Inadequate  
2 = Needs improvement  
3 = Satisfactory  
4 = Above average  
5 = Excellent

When examining a child's hearing,

you should:

YES    NO    RATING    COMMENTS

1. Explain to the mother and patient what you are going to do					
2. If the child is three years old or older, have him turn his head away so he does not see your lips					
3. Cover the ear not being examined					
4. Quietly say a few words into the ear being tested. Have the child repeat each word after you					
5. Repeat the words, saying them more softly and moving away each time					
6. Use the length of your outstretched arm as your greatest distance					
7. Repeat the test on the opposite ear					

YES NO RATING COMMENTS

8. Seat a child younger than three years old on your lap so he faces away from you					
9. Crumple a piece of paper behind the child's head on the left					
12. See if the child turns to look in the direction of the noise made by the paper					
11. Repeat this test on the opposite side					

# *Unit 8*

## **Ear, Nose, Sinus, and Throat Problems**

### **STUDENT GUIDE**

#### **OBJECTIVES**

1. Describe the signs and symptoms of:

Acute upper respiratory infection	Wax in ears
Acute otitis media	Acute sinusitis
Chronic otitis media	Acute bacterial tonsillitis
Mastoiditis	Foreign body in the ear, nose, and throat
External otitis	Nose bleed
2. Interview and examine patients for ear, nose, and throat problems.
3. Test a child for hearing loss; clean pus from a draining ear; control nose bleed; locate and remove a foreign body from the ear, nose, or throat; remove wax from the ear canal.
4. Give patients and their families instructions on care of ears, nose, sinus, and throat, and on preventing associated problems.

#### **LEARNING ACTIVITIES**

1. Learning about ear, nose, sinus, and throat problems through discussions and presentations by the instructor.
2. Practicing how to diagnose ear, nose, sinus, and throat problems, using case studies.
3. In a clinical setting, instruction, demonstration, and practice in:
  - Testing a child for hearing loss
  - Cleaning pus from a draining ear
  - Controlling a nose bleed
  - Locating and removing a foreign body from the ear, nose, or throat
4. Students will have three days of practice in a clinic.

## 8.1 ACUTE UPPER RESPIRATORY INFECTION

When people say they have “caught a cold,” they mean they have caught one of many different viruses. The virus infects the ears, nose, and throat. This viral cold, or acute upper respiratory infection, spreads easily. People can catch an acute upper respiratory infection from another person. The virus travels in the air you breathe. People pass it by talking, coughing, and sneezing. An acute upper respiratory infection usually clears without treatment. Because it is a virus infection, antibiotics will not help cure an acute respiratory infection.

### CLINICAL PICTURE

#### a. Presenting complaint

The presenting complaint depends upon where the virus attacks.

Complaints may include any of these symptoms:

Runny nose

Pain, dryness, or tickling in the throat

Mild fever with ill feeling and headache

Sneezing

Hoarseness

Coughing



1. OTITIS
2. SINUSITIS
3. TONSILLITIS

#### b. Medical history

Acute upper respiratory infections usually begin with one to two days of general illness, **mild fever, headache**, and the start of ear, nose, and throat problems.

#### c. Physical examination

**Clear discharge** may come from the patient's nose. Look for **redness in his throat**, some tenderness and **swelling of the lymph glands** in his neck, and **red eyes**. The patient may be hoarse and have a **dry cough**.

### COURSE AND COMPLICATIONS

Most acute upper respiratory infections last three to ten days. The patient recovers with no problem. However, in a small number of cases, the virus infection is complicated by a secondary bacterial infection. Instead of feeling better, the patient with a secondary bacterial infection suddenly develops a higher fever and becomes more ill. If the cold lasts longer than ten days, look for symptoms of secondary bacterial infection in the throat, the sinuses, the ears, or the bronchi. Examples of secondary bacterial infections are bacterial tonsillitis, acute sinusitis, acute otitis media, and bronchitis. The patient may even develop pneumonia as a complication.

### PATIENT CARE AND PREVENTION

#### a. Give extra fluids

Encourage the patient to drink at least one to two extra glasses of water, juice, or other liquid between each meal.

#### b. Give aspirin

Aspirin reduces fever. Aspirin also helps the patient with a cold feel better.

#### c. Encourage the patient to rest

The body needs rest to fight the cold. The patient who tires himself increases his risk of a secondary bacterial infection.

#### d. Check for complications

Tell the patient to return if his fever rises. Tell him to come back if he develops pain in his ears, a more severe sore throat, cough, or headache. Any of these can be a sign of a secondary bacterial infection. He will require antibiotics only if one of these complications occurs.

## 8.2 ACUTE OTITIS MEDIA

Otitis media infects mostly infants and young children. It usually starts with a cold.

The ear drums often turn red during the acute stage of a virus infection. However, the virus does not cause fever or pain in the ears.

When a bacterial infection spreads through the eustachian tube into the middle ear, the fluid and pus create pressure behind the ear drum. This leads to severe pain. If the ear drum bursts, the pus drains out and the pain eases.

### CLINICAL PICTURE

#### a. Presenting complaint

If the child is old enough, he will complain of severe **pain** in one or both ears. His ear will feel congested. He will not be able to hear as well as he normally can.

#### b. Medical history

The patient often will have had a cold within the previous week. He may have started to improve when severe pain with **fever** and chills suddenly develops. Sometimes there is no previous illness.

#### c. Physical examination

You cannot see an eardrum without special instruments. You must depend upon the history of severe **ear pain** and **fever** to diagnose otitis media. Severe ear pain and fever are the two most common findings associated with otitis media. In a small infant, fever associated with irritability and pulling at the ears, suggests middle ear infection. Examination of the external ear shows no tenderness or swelling. If the ear drum has burst, you will see a discharge with pus. Since a burst ear drum releases the pressure, the pain will decrease with the appearance of the discharge.

### COURSE AND COMPLICATIONS

The acute stage of otitis media can become a chronic infection. The infection can spread into the mastoid bones behind the ear and cause an infection. This infection is mastoiditis. The infection can also cause meningitis. For meningitis in children, see Infants and Children module. For meningitis in adults, see Infectious Diseases module. Chronic infection of the ear drum can cause a permanent loss of hearing.

### PATIENT CARE AND PREVENTION

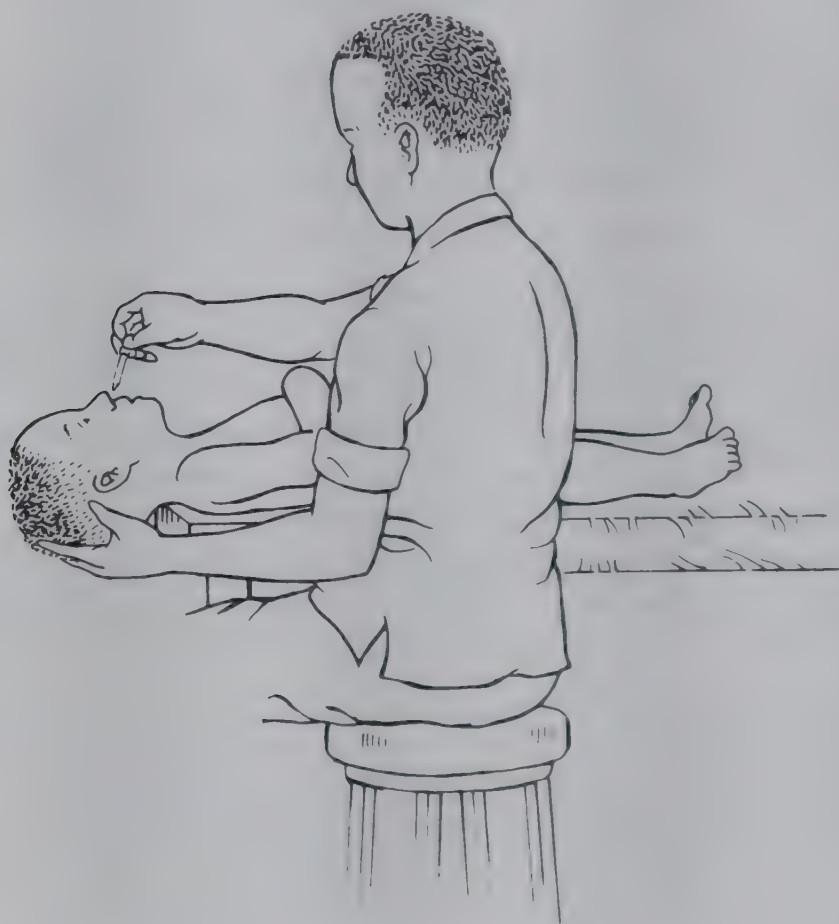
#### a. Give an oral antibiotic

Give a patient with acute otitis media an oral antibiotic for one week. This is the most effective means of treating this infection.

You should give ampicillin or penicillin, according to the Patient Care Guides.

b. Give nose drops

Put .25% phenylephrine hydrochloride nose drops in the child's nose three times a day for three to four days. Show the child's parents how to do this, then ask them to demonstrate. See Patient Care Guides for acute otitis media.



- c. To help the patient feel better and to control the pain, give aspirin every four hours as needed.
- d. Refer patients who have lost all or part of their hearing to a doctor. You should also refer patients who do not feel better after one week of treatment. Also refer patients whose infected ear continues to drain after one week.

### 8.3 CHRONIC OTITIS MEDIA

Otitis media becomes chronic when its acute condition worsens because of a lack of proper treatment. When the eardrum has burst, fluid continues to drain from the ear. This fluid destroys the eardrum. The patient can lose his hearing. Like acute otitis media, chronic otitis occurs most often in children.

#### CLINICAL PICTURE

##### a. Presenting complaint

A *pussy discharge* drains from one or both ears. The discharge often *smells foul*.

##### b. Medical history

The patient usually has had acute otitis media. The pain of acute otitis was relieved when the ear drum broke and the pus began to drain. If *pus* drains from the ear for *more than two weeks*, diagnose it as chronic otitis media.

##### c. Physical examination

A foul smelling, *pussy discharge* drains from the ear. You will rarely find fever. The patient does not complain of pain. If the infection has reached the mastoid bone, the mastoid process may be tender. Examine children for *hearing loss*. See Patient Care Procedure.

#### COURSE AND COMPLICATIONS

If you have already treated the ear with antibiotics, the drainage may be difficult to stop. But if you have not used antibiotics, treatment has a good chance of being successful.

Chronic otitis media destroys the eardrum. The small bones of the middle ear are also damaged. The patient will have *hearing loss* in that ear. More serious diseases, such as a brain abscess, meningitis, or weakness of the nerves which control the facial muscles can occur.

#### PATIENT CARE AND PREVENTION

##### a. Give antibiotics

Either penicillin or ampicillin should be given by mouth for at least two weeks.

b. Clean the ear

The ear canal should be dried with a cotton-tipped applicator at least three times a day. Show the mother how to clean the ears. Be sure she knows how to do this properly. See Patient Care Procedure for ways to clean pus from a draining ear with a dry swab.

c. Refer the patient to a hospital.

If the ear drains for more than two weeks, or if the patient loses hearing, refer him to a doctor.

d. Treat acute otitis media early

To prevent chronic otitis media, treat acute otitis media early and correctly. Also, parents should be warned not to pour oil or other medicine into a draining ear. This only promotes more infection.

## 8.4 MASTOIDITIS

Feel the mastoid bones directly behind your ear lobes. They are hollow bones with many air pockets. The air pockets are connected with the middle ear. A person with otitis media, a bacterial infection in the middle ear, already has some infection in his mastoids. However, he will not have the signs of a mastoid infection.

### CLINICAL PICTURE

a. Presenting complaint

The patient with an acute infection of his mastoids usually has had a recent ear infection. He complains of **ear pain** or **pain in the mastoid bones**, together with **fever** and **headache**.

b. Medical history

If you suspect mastoiditis, ask the patient if he has had an ear infection during the past month. Also ask whether any pus has drained from his ears. If pus has drained from his ear for two weeks or more, you can suspect mastoiditis. An infection of the mastoid bones usually only occurs when an ear infection has not been properly treated.

### c. Physical examination

Look for pus draining from the ear. The mastoid area behind the ear may be **swollen**, **red**, and **tender**. Tap the mastoid process with the end of your finger. This will cause **pain** if the mastoid bone is infected.

## COURSE AND COMPLICATIONS

Acute mastoid infection can become chronic. Like other bone infections, the mastoid bone must be opened and scraped clean to eliminate the infection.

## PATIENT CARE

Immediately refer the patient to the hospital. Give him aspirin for pain.

## 8.5 EXTERNAL OTITIS

External otitis refers to infection outside the eardrum. It affects the skin lining the ear canal. Earrings, irritation by a foreign body, fungus infection, and bacterial infection can all cause external otitis. Dirty water trapped in the ear canal after swimming or bathing also frequently causes external otitis.

### CLINICAL PICTURE

#### a. Presenting complaint

Patient complains of **pain in his ear**.

#### b. Medical history

Swimming in dirty water often causes external otitis.

#### c. Physical examination

The **lymph glands** below the ear may be **swollen** and **painful**. Sometimes a slight amount of **discharge** will drain from the ear. Pulling or pushing on the ear will cause **sharp pain**. Look for a **scaly, red rash** in the **ear canal**. The rash may be **wet and weepy**. The **ear canal** may be **swollen**.

### COURSE AND COMPLICATIONS

Swelling can lead to obstruction of the ear canal and severe pain. However, the disease usually does not become more serious.

### PATIENT CARE AND PREVENTION

#### a. Aspirin

Give aspirin for pain.

#### b. Penicillin V

If you find fever and swelling of the lymph glands in the neck, give penicillin V by mouth for seven days. See Patient Care Guides.

#### c. Keep ear clean

Local treatment should keep ear clean and dry. Gently wipe out the ear canal with a swab. Do this daily. See Patient Care Procedures.

#### d. Keep ear dry

Advise the mother not to let the child swim or get his ears wet. If the patient has severe pain and swelling of the ear, tell the mother to apply warm wet compresses. She should do this thirty mintues, four times a day for several days to reduce inflammation. The mother should gently dry the ear canal after the wet compresses are used.

#### e. Give instructions

Tell the patient or the patient's mother about the signs and symptoms of external otitis complications. Tell them to return to the clinic if the patient is not better in five days.

#### f. Explain hygiene

Tell the patient and his family how the infection starts and how to keep the ears clean.

## 8.6 WAX IN THE EARS

Glands along the ear canals keep them soft and clean. These glands produce wax. When a person tries to clean his own ears, he often packs the wax down into the canal.

When the wax completely obstructs the ear canal or becomes packed against the eardrum, the person has trouble hearing.

### CLINICAL PICTURE

#### a. Presenting complaint

When wax is packed into the ear, the patient may complain of fullness and discomfort there. He may also complain of a hearing loss.

#### b. Medical history

Ask the patient how he cleans his ears. He probably uses his finger, a bit of wood, or some small instrument.

#### c. Physical examination

You will see dark material inside the ear canal.

### COURSE AND COMPLICATIONS

Ear wax causes no serious complications.

### PATIENT CARE AND PREVENTION

#### a. Soften the wax

Tell the patient to put several drops of glycerin baby oil or 3% hydrogen peroxide into each ear canal once a day for a week. This will soften the wax so it can drain out.

#### b. Irrigate the ear

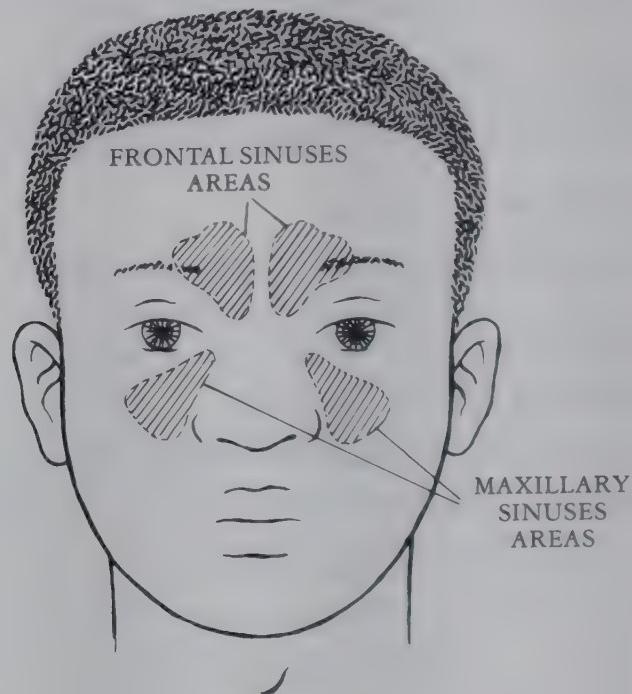
Ask the patient to return after one week of treating himself with glycerin baby oil or 3% hydrogen peroxide. The wax should be soft. When the patient returns after one week, use a large syringe and warm water to gently irrigate the ear canal. This will wash out the remaining wax.

#### c. Prevention

Tell the patient not to stick anything into his ear. Dry, hot weather can harden ear wax. Sometimes the ear canal is twisted. The main reason wax blocks the ear canal is that the person tries to clean his ear but instead packs the wax in.

## 8.7 ACUTE SINUSITIS

The sinuses are air pockets in the bones of the face. The sinuses connect with the nasal cavity. They are lined by mucous membranes. Colds, which are infections of the upper respiratory system, spread into the sinuses. These colds are usually virus infections. When secretions block the openings between the sinuses and the nasal cavity, pressure builds inside the sinuses.



A bacterial infection may then develop. Acute sinusitis is a complication of an acute upper respiratory infection. It requires antibiotic treatment.

### CLINICAL PICTURE

#### a. Presenting complaint

The patient with acute bacterial sinusitis complains of **headache** and **severe pain over his sinus**. The location of the pain depends upon the sinus involved. The patient often has a fever and feels ill.

#### b. Medical history

Acute sinusitis usually follows an acute respiratory illness. Sometimes a dental extraction will cause acute sinusitis. The patient

develops congestion of his nose, with thick, *pussy*, nasal discharge. He may have fever and chills.

c. Physical examination

Look for a thick, yellow discharge from the nose. You may find redness and swelling over the sinus area. The sinus will be painful when you tap it.

#### COURSE AND COMPLICATIONS

A chronic infection of the sinuses is the most common complication.

#### PATIENT CARE AND PREVENTION

a. Clear the infection

An oral antibiotic such as ampicillin, given four times a day for one week, will clear the infection. See Patient Care Guides for dosage.

b. Use nose drops

Ephedrine nose drops, given three times a day, will open the passageway between the sinuses and the nasal cavity and allow the sinuses to drain more easily. See Patient Care Guides.

c. Reduce pain

Warm compresses held against the tender part of the face and aspirin will reduce the pain.

d. Avoid infections

To prevent acute sinusitis, avoid upper respiratory infections.

## 8.8 ACUTE BACTERIAL TONSILLITIS

Children most frequently suffer from acute tonsillitis. The lymph tissue in the back of the throat can be infected with several kinds of bacteria. The tissue swells and becomes inflamed. The germ which causes rheumatic fever and nephritis often causes tonsillitis first. Throat infections spread easily from person to person through coughing, sneezing, and close contact.

## CLINICAL PICTURE

### a. Presenting complaint

Bacterial tonsillitis often causes a sudden onset of **cough, high fever, chills, sore throat, and difficulty swallowing**. The fever and throat pain is usually worse in acute bacterial tonsillitis than in viral upper respiratory infections.

### b. Medical history

A person with bacterial tonsillitis may have a sudden onset of severe sore throat. The patient may already have had symptoms of upper respiratory infection. These symptoms are a runny nose, cough, sore throat, aches and pains, and some fever. After three to five days, the patient's fever suddenly rises and his throat grows more sore.

### c. Physical examination

Look for **tender, swollen lymph glands in the neck**. The tonsils will be swollen and red. Look for a **white to yellow exudate** in the pockets of the **tonsils**. The patient will have a fever and difficulty swallowing.

## COURSE AND COMPLICATIONS

Without proper treatment, a tonsil infection can become chronic. The tonsils will be red and show some exudate. The breath odor is foul. Acute infections occur more often than chronic.

Acute tonsillitis can lead to acute otitis media, acute sinusitis, bronchitis, or pneumonia. After having acute tonsillitis, a patient can develop rheumatic fever or nephritis.

## PATIENT CARE

### a. Advise patient to rest

Encourage the patient to rest in bed for a few days. Rest helps the body fight infection.

### b. Give aspirin

Give the patient aspirin to take every four hours for fever and discomfort.

### c. Give an antibiotic

Penicillin will shorten the course of the illness. It will prevent rheumatic fever. Give the antibiotic by mouth if the patient will take the drug every six hours for a full ten days. Otherwise, give one injection of benzathine penicillin. See Patient Care Guides.

d. Reduce the pain

Reduce the patient's throat pain by having him gargle with warm salt water three or four times a day.

#### PREVENTION

a. Seek care

Tell the patient's parents to be sure to bring any other members of the family with these symptoms to the clinic. All the people living in a house with a bacterial tonsillitis patient risk catching the disease.

b. Talk about hygiene

Tell the patient, family, and schoolmates about the rules of good personal hygiene and about how disease spreads.

c. Prevent colds

Prevent upper respiratory infections. Follow the care of patients who have an upper respiratory infection. Treat acute bacterial tonsillitis early.

## 8.9 FOREIGN BODY IN EARS, NOSE, AND THROAT

Children sometimes push things like peas, pebbles and pieces of paper into their nose and ears. Insects may also block the ear or nose canal. While eating or holding something in his mouth, or while unconscious, a person may choke or swallow something. This foreign body lodges in the back of the throat or in the air or food passages. The signs and symptoms of a foreign body in the ear, nose or throat, depend upon the size and shape of the object, where it goes, and how long it remains there.

#### CLINICAL PICTURE

a. Presenting complaint

A foreign body in the ear causes **pain** and **irritation** of the ear canal.

A foreign body in the nose blocks one nostril. If the foreign body has been there very long, a **pussy, foul smelling discharge** develops. Sneezing and pain may occur.

If a foreign body lodges in the larynx, it will produce hoarseness, noisy breathing, **cough**, and gagging. With all or a part of the airway blocked, the patient may turn blue and fight for breath.

If a foreign body passes into the esophagus, the person feels something stuck in his throat. Neck pain, coughing, and gagging result.

#### b. Medical history

Usually, a child will say he does not remember pushing anything into his ear or nose. You should ask the parents. The parent may have seen him do so.

When adults say something is stuck in their throat, they have usually gagged. The patient may also have vomited while unconscious and sucked material into his air passageway. He may have been *eating* hastily and choked on a bone or large piece of food. Small fish bones often are caught in the back of the throat. If this happens with a child, he has a *short, hacking cough*.

#### c. Physical examination

With a nasal speculum and a good light, you may be able to see a foreign body in the ears or nose.

Children often have a short, hacking cough when something is caught in their throat. Have the patient put his head back. Use a tongue depressor and good light source to examine the back of throat while patient makes a sound like "R". The foreign body may be visible near his tonsils or, if it is a fish bone, in the pharynx.

### PATIENT CARE

#### a. Foreign body in the nose



A foreign body in the nose must be taken out with forceps. Firmly hold the patient's head back. Find a good light source. Then put the nasal forceps into the nostril high enough to grasp the object and remove it. If the object cannot be removed, refer the patient to a doctor.

**b. Foreign body in the ear**

You may not suspect that a foreign body is in a child's ear unless the child says he put it in or someone saw him do it. Look for the foreign body. Hold a large ear syringe next to the ear canal. Flush water into the ear. If you cannot flush out the object, refer the patient to a physician.

**c. Foreign body in the throat**

A foreign body stuck in a person's throat but not blocking his airway can be taken out with long forceps. If the foreign body cannot be seen or cannot be taken out with tools you have, refer the patient to a doctor.

**d. Foreign body blocking airway**

When the foreign body blocks a person's airway, carry out the Heimlich Maneuver. See Patient Care Procedures for Heimlich Maneuver.

## 8.10 NOSE BLEEDS

Nose bleeds are usually from the front of the nose. Sometimes the bleeding goes into the throat. Most often a tiny blood vessel on the mucous membrane of the nose breaks and bleeds. The patient may have a cold. He may pick at his nose because it itches. Some nose bleeds start because of blood pressure, trauma, or a bleeding problem.

### CLINICAL PICTURE

**a. Presenting complaint**

The patient complains of sudden bleeding from one side of his nose. If the bleeding goes into the throat, he may spit up blood. The blood is bright red.

**b. Medical history**

Ask about a recent cold or upper respiratory infection. Nose bleeds often occur in children for no apparent reason. Ask adults with nose bleeds if they have a history of high blood pressure.

**c. Physical examination**

Check the patient's blood pressure. Patients with high blood pressure often have nose bleeds. Examine the patient for signs of anemia. Severe nose bleeds can lead to serious blood loss and shock. When the bleeding is from the front of the nose, you can often see the bleeding site with a nasal speculum. Look for irritation and ulceration of the mucous membrane inside the nose.

**COURSE AND COMPLICATIONS**

A nose bleed may be a sign of serious problem, like high blood pressure. If it is not, the bleeding is rarely serious.

**PATIENT CARE**

- a. If the bleeding is from the back of the nose into the throat and the patient continues to bleed, refer him to a hospital.
- b. Manage nose bleeds in the front of the nose according to the Patient Care Procedure for nose bleeds.

## REVIEW QUESTIONS

### **Assessing Patients with Ear, Nose, Sinus and Throat Problems**

1. When you are taking a history of a patient who complains of having a common cold, or upper respiratory infection, you ask how long he has had it. Why is this question important?
  
2. List four possible complications of an upper respiratory infection.
  - a.
  - b.
  - c.
  - d.
  
3. Acute otitis media is an infection of the middle ear. How does bacteria get into the middle ear?
  
4. What is the one most common presenting complaint associated with acute otitis media?
  
5. Acute otitis media is a complication of an \_\_\_\_\_.  
\_\_\_\_\_.
  
6. How would you care for a five-year-old child with acute otitis media? Use your Patient Care Guide to answer this question.
  
7. When would you refer a patient with acute otitis media to a hospital?

8. A common complication of acute otitis media is chronic otitis media. What is the most common presenting complaint associated with this problem?
9. You should ask a patient with otitis media how long his ear has been draining. Why is this information important?
10. Patients with acute otitis media and patients with chronic otitis should both be referred to a doctor if treatment does not clear the infection.
- How long should you treat acute otitis media before referring the patient?
  - How long should you treat chronic otitis media before referring the patient?
11. The prevention of chronic otitis media is the correct and early treatment of \_\_\_\_\_.
12. Write the presenting complaint, medical history, and physical examination findings you would expect from a patient with mastoiditis.
- Presenting complaint:
- Medical history:
- Physical examination:
13. What is the indication for using penicillin V for a patient diagnosed as having external otitis? Use your Patient Care Guides to answer this question.

14. If ear wax has built up in a patient and become firmly packed into the ear canal, he may complain of \_\_\_\_\_ or \_\_\_\_\_.
15. Acute sinusitis is a complication of an \_\_\_\_\_.
16. What is the primary physical finding when making the diagnosis of acute sinusitis?
17. What is the drug of choice for opening the passageway between the sinuses and the nasal cavity so the sinuses of a patient with acute sinusitis can drain?
18. Match the following symptoms and physical signs with the problems:
- |                                    |                                 |
|------------------------------------|---------------------------------|
| _____ a. Exudate on tonsils        | A - Upper respiratory infection |
| _____ b. Runny nose and dry cough  | B - Acute bacterial tonsillitis |
| _____ c. Headache                  |                                 |
| _____ d. Redness of throat (alone) |                                 |
| _____ e. High fever                |                                 |
| _____ f. Mild fever                |                                 |
| _____ g. Red eyes                  |                                 |
19. A mother brings her ten-year-old son to you. She reports that a few days ago the boy had a runny nose and cough. Now he is hot. The boy says swallowing, eating, and drinking hurts his throat. You find:  
Weight: 50 kg Temperature: 38.8°C  
Swollen and tender lymph glands in the boy's neck. His tonsils are red, swollen, and are spotted with a white exudate.  
What is your diagnosis? How would you treat this patient?
20. A mother brings you her three-year-old boy. She tells you the child has been complaining about his nose for several days. Because she was busy and the child did not have a fever, she did not worry about it.

However, the child still complains about his nose. He says he can't breathe out of one side. Yesterday pus started draining out of the left nostril. You ask the child if he put anything in his nose. The mother scowls at her child and seeing her, the boy quickly says no. The child's temperature is normal. His eyes, ears, and throat are normal. He has no pain over his sinuses. The right nostril is clear. You cannot see inside the left nostril because of the pus. You find no swollen or painful lymph glands around the ear, under the jaw, or in the neck. What do you suspect is the child's problem? How would you care for this patient?

21. If an adult patient comes to you with a complaint of nose bleeds, what should you always check as a possible cause?

## REVIEW EXERCISE

### Case Study 6

Name of Patient:	Moto, Henry
Sex:	Male
Date of Birth:	5 August 1957
Date of Visit:	12 July 1979
Urine:	Negative
Vital Signs:	Temperature 36.6°C Pulse 72 Respirations 18 Blood Pressure 110/80 Weight 60.7 kg
Presenting Complaint and Medical History:	The patient has a throbbing earache. It began with itching inside his right ear. The pain began suddenly and is growing worse. The pain has lasted two days. An analgesic, panadol, helps lessen the pain. No aggravating factor or associated symptoms are presented. The patient has no fever. He has not seen any discharge coming from the ear. There is no sign of a foreign body causing the problem. He has no shortness of breath, no cough, no chest pain, and no weight loss. His hearing is normal. He has a good appetite, his bowels are regular, and his urine is normal.
Physical Examination:	The patient looks healthy. His mucous membranes are pink. His tongue is moist. His tonsils are normal. His neck is normal. His right ear canal is red and swollen. A thin, watery discharge covers the painful area. Moving the ear causes pain. Patient's mastoids are not painful or swollen. His breath sounds normal. His chest is normal. His heart is normal. His abdomen is normal.

Study the information given above, then answer these questions for discussion.

1. What is the diagnosis?
2. What information in the case study was most helpful to you when you made your diagnosis?
3. Use your Patient Care Guides to decide what treatment you would give this patient.
4. What advice would you give this patient and the patient's family?

## REVIEW EXERCISE

### Case Study 7

Name of Patient:	Isley, Peter		
Sex:	Male		
Date of Birth:	3 March 1968		
Date of Visit:	12 August 1979		
Urine:	Negative		
Vital Signs:	<p>Temperature: 37.6°C Pulse 86 Respirations 22 Weight 43.2 kg</p>		
Presenting Complaint and Medical History:	<p>The patient has had trouble swallowing for the past two days. He says swallowing hurts him. The onset was sudden and the pain is growing worse. Aspirin helps relieve the pain. Hard foods aggravate it. He has a fever and has had a dry cough for two days.</p> <p>Past medical history: The patient had mumps three years ago. He has never been hospitalized before. His immunization shots are up to date.</p>		
Physical Examination:	<p>The patient has a slight fever. His mucous membranes are moist and pink. His tongue is normal. His tonsils are swollen and red. They are covered with pus. The lymph glands in his neck are swollen and painful. His breath sounds normal. His chest, heart and abdomen are all normal.</p>		

Study the information given above, then answer these questions for discussion.

1. What is the diagnosis?
2. What information in the case study was most helpful to you when you made your diagnosis?
3. Use your Patient Care Guides to decide what treatment you would give this patient.
4. What advice would you give this patient and the patient's family?

## REVIEW EXERCISE

### Case Study 8

Name of Patient:	Barnes, Lucy
Sex:	Female
Date of Birth:	4 January 1938
Date of Visit:	7 October 1974
Urine:	Negative
Vital Signs:	Temperature 37.7°C Pulse 80 Respirations 20 Blood Pressure 140/90 Weight 67.5 kg
Presenting Complaint and Medical History:	Patient complains of a headache in her forehead. She has a stuffy nose, especially in the morning when she rises. Sometimes she has a fever. Discharge from her nose sometimes is watery and sometimes is thick and yellow.  Past medical history: The patient has never been hospitalized. Her family medical history shows nothing special to note.
Physical Examination:	The patient is an obese, worried-looking woman. She breathes through her mouth. Her mucous membranes are pink. Her tongue is pink, but coated and dry. Her pharynx looks red. She has post nasal drip. Her tonsils are normal. Her neck, chest, and heart are normal. Her abdomen sticks out. Her abdominal organs are not palpable. She shows no sign of edema. Her genitalia are normal. Pressure above her eyebrows causes pain. Her nasal mucous membranes are congested.

Study the information given above, then answer these questions for discussion.

1. What is the diagnosis?
2. What information in the case study was most helpful to you when you made your diagnosis?
3. Use your Patient Care Guides to decide what treatment you would give this patient.
4. What advice would you give this patient and the patient's family?

## REVIEW EXERCISE

### Case Study 9

Name of Patient:	Abel, Cass
Sex:	Male
Date of Birth:	10 August 1959
Date of Visit:	5 February 1979
Vital Signs:	Temperature 38.2°C Pulse 72 Respirations 20 Weight 49.5 kg
Presenting Complaint and Medical History:	The patient complains of fever, runny nose, coughing, sore throat, sneezing, and general aches. The symptoms started three days ago. They do not seem to be growing any worse. His cough is dry. He has lost his appetite, but has not lost weight.  Past medical history: The patient has frequent headaches. He occasionally drinks and smokes. Family history: The patient's father died soon after he had a stroke.
Physical Examination:	The patient is a healthy looking young man. His mucous membranes are pink. His tongue is moist and coated. His pharynx is clear but inflamed. His neck is not swollen. His breath sounds normal. His heart and abdomen are normal.

Study the information given above, then answer these questions for discussion.

1. What is the diagnosis?
2. What information in the case study was most helpful to you when you made your diagnosis?
3. Use your Patient Care Guides to decide what treatment you would give this patient.
4. What advice would you give this patient and the patient's family?

## REVIEW EXERCISE

### Case Study 10

Name of Patient:	Ali, Ben
Sex:	Male
Date of Birth:	16 June 1973
Date of Visit:	12 July 1979
Urine:	Negative
Vital Signs:	Temperature 37.7°C Pulse 74 Respirations 18 Blood Pressure 120/80 Weight 29.2 kg
Presenting Complaint and Medical History:	Fluid has been draining from the patient's left ear for the past twenty-four hours. The problem started suddenly with fever and pain in his ear. The pain was worse when he swallowed food. He had a slight decrease in hearing on the left side. After three days, the ear began to drain.  Past medical history: The patient has had no ear problems before. He has never been kept in the hospital. His vaccinations are up to date.
Physical Examination:	The patient looks like a healthy young boy. His mucous membranes are pink. His tongue is moist. His tonsils are slightly enlarged, but not inflamed. His right ear looks normal. A pussy fluid drains from his left ear. The ear drum cannot be seen. Moving the ear causes him no pain. His mastoids are normal, without pain. His chest, heart, and abdomen are all normal.

Study the information given above, then answer these questions for discussion.

1. What is the diagnosis?

2. What information in the case study was most helpful to you when you made your diagnosis?
3. Use your Patient Care Guides to decide what treatment you would give this patient.
4. What advice would you give this patient and the patient's family?

# SKILL CHECKLIST

## Cleaning Pus From a Draining Ear

This checklist has two purposes.

- 1) Students should use it as a guide for checking their own skills or other students' skills.
- 2) Supervisors should use it when they evaluate how well students clean pus from a child's ear.

After observing a student, enter a rating in the appropriate column.

Rating: 1 = Inadequate  
2 = Needs improvement  
3 = Satisfactory  
4 = Above average  
5 = Excellent

When you use a dry swab to clean  
pus from a draining ear:

YES    NO    RATING    COMMENTS

1. Collect your equipment and materials				
2. Wash your hands with soap and water				
3. Tell the patient what you are going to do				
4. If sterile, cotton-tipped applicators are available, use them				
5. If sterile, cotton-tipped applicators are not available, make your own with cotton balls and a metal carrier stick				
6. Apply cotton to the end of the metal carrier stick				
7. Form the cotton to the correct shape and size				
8. If the patient is a child, seat him on his mother's knees				

YES NO RATING COMMENTS

9. Have the mother hold the child's head still				
10. Brace the edge of your hand against the side of the patient's head before starting to clean				
11. Clean the outer ear first				
12. When the outer ear is clean, gently roll the swab in the ear canal				
13. Throw away used swabs. Use only clean ones.				
14. Swab the ear canal until cotton comes back clean				
15. Do not put the swab so far into the ear that you cannot see the white or flat end of it				
16. Show the mother how to clean her child's ear				
17. Have the mother clean her child's ear in the clinic				
18. Give the mother enough supplies to last until her next visit				
19. If you think the mother cannot safely clean the ear canal, show her how to clean the outer ear				

# SKILL CHECKLIST

## Removing a Foreign Body From an Ear

This checklist has two purposes.

- 1) Students should use it as a guide for checking their own skills or other students' skills.
- 2) Supervisors should use it when they evaluate how well students remove a foreign body from a patient's ear.

After observing a student, enter a rating in the appropriate column.

Rating: 1 = Inadequate  
2 = Needs improvement  
3 = Satisfactory  
4 = Above average  
5 = Excellent

When removing a foreign body  
from the ear:

YES   NO   RATING      COMMENTS

1. Collect materials and equipment				
2. Wash your hands with soap and water				
3. Tell the patient what you are going to do				
4. Position the patient properly				
5. Ask the patient to hold a kidney basin under his ear				
6. Use a good light				
7. Check the water temperature with your finger. It should be room temperature				
8. Fill an ear syringe with water				
9. Gently pull the ear backwards				

YES NO RATING COMMENTS

10. Point syringe tip up and forward into the ear canal				
11. Flush the ear with a constant stream of water going in as fast as it will				
12. Flush the ear several times, or until foreign body comes out				
13. If the foreign body does not come out, refer the patient to a doctor				

# SKILL CHECKLIST

## Removing a Foreign Body From a Child's Nose

This checklist has two purposes.

- 1) Students should use it as a guide for checking their own skills or other students' skills.
- 2) Supervisors should use it when they evaluate how well students remove a foreign body from a child's nose.

After observing a student, enter a rating in the appropriate column.

Rating: 1 = Inadequate  
2 = Needs improvement  
3 = Satisfactory  
4 = Above average  
5 = Excellent

When removing a foreign body  
from a child's nose:

YES   NO   RATING      COMMENTS

1. Collect your materials and equipment				
2. Wash your hands with soap and water				
3. Tell the patient what you are going to do				
4. Have the child's mother hold her child's head as far back as possible				
5. Use a good light source				
6. Use a nasal forceps to open the nostril				
7. Use a long forceps to grasp and remove the foreign body				
8. Refer the patient to a doctor if the foreign body cannot be removed				

# SKILL CHECKLIST

## Removing a Foreign Body From the Throat

This checklist has two purposes.

- 1) Students should use it as a guide for checking their own skills or other students' skills.
- 2) Supervisors should use it when they evaluate how well students remove a foreign body from a patient's throat.

After observing a student, enter a rating in the appropriate column.

Rating: 1 = Inadequate  
2 = Needs improvement  
3 = Satisfactory  
4 = Above average  
5 = Excellent

When removing a foreign body  
from the throat:

YES   NO   RATING      COMMENTS

1. Collect the materials you will need				
2. Wash your hands with soap and water				
3. Tell the patient what you are going to do				
4. Seat the patient				
5. Use a good light				
6. Ask the patient to swallow any saliva in his mouth				
7. Tilt the patient's head back. Tell him to open his mouth wide				
8. Depress the first half of the tongue with a tongue depressor				

YES NO RATING COMMENTS

9. Have the patient say 'R' as you examine the throat				
10. Use a long forceps to grasp and remove the foreign body				
11. Refer the patient to a doctor if you cannot see the object or remove it				

# SKILL CHECKLIST

## Controlling Nose Bleeds

This checklist has two purposes.

- 1) Students should use it as a guide for checking their own skills or other students' skills.
- 2) Supervisors should use it when they evaluate how well students control nose bleeds.

After observing a student, enter a rating in the appropriate column.

Rating: 1 = Inadequate  
2 = Needs improvement  
3 = Satisfactory  
4 = Above average  
5 = Excellent

To control a nose bleed:

YES   NO   RATING      COMMENTS

1. Collect the equipment and materials you will need				
2. Wash your hands with soap and water				
3. Tell the patient what you are going to do				
4. Have the patient sit quietly, pinching his nose for ten minutes				
5. Place cotton soaked in epinephrine 1:1000 in the bleeding side of his nose and tell him to pinch it for ten minutes more				
6. Check for bleeding				
7. Remove cotton. If bleeding continues, use a nasal speculum to expose the bleeding area				

YES NO RATING COMMENTS

8. Use a nasal forceps to place a small piece of gauze soaked in epinephrine 1:1000 on the sore				
9. Leave this gauze on the sore for a few minutes before removing				
10. Pack the nasal cavity with lubricating gauze, beginning from the floor of the nostril				
11. Pack in layers of the gauze				
12. Leave the gauze in for two days				
13. Remove the gauze using forceps				
14. Repack the nose and refer the patient to a doctor if bleeding starts again				

# SKILL CHECKLIST

## Removing Wax From an Ear Canal

The checklist has two purposes:

- 1) Students should use it as a guide for checking their own skills or other students' skills.
- 2) Supervisors should use it when they evaluate how well students remove wax from an ear canal.

After observing a student, enter a rating in the appropriate column.

Rating: 1 = Inadequate  
2 = Needs improvement  
3 = Satisfactory  
4 = Above average  
5 = Excellent

To remove wax from an ear canal:

YES   NO   RATING      COMMENTS

1. Show the patient or his parents how to soften the wax by putting three to four drops of glycerin baby oil or 3% hydrogen peroxide into the ear canal. Patients should do this every day for one week					
2. Tell the patient not to try to remove the wax himself					
3. Tell the patient to return in one week					
4. Fill a basin with luke warm water and locate a large syringe					
5. Tell the patient what you are going to do					
6. Wash your hands with soap and water					

	YES	NO	RATING	COMMENTS
7. Tell the patient to lie on his back. If your patient is a child, restrain him with a sheet				
8. Fill the syringe with water. Gently place it close to the back entrance to the ear canal and squirt the water				
9. Drain water from the ear into a kidney basin. Repeat the procedure until the wax comes out				
10. Dry the ear with a towel				
11. If the wax did not come out, repeat the first three steps				

## *Unit 9*

# **Providing Care for Patients with Dental, Eye, Ear, Nose and Throat Problems**

## **STUDENT GUIDE**

### **ENTRY LEVEL**

Before starting your clinical experience, you must have scored at least 80% on a test of your knowledge about dental, eye, ear, nose, and throat (DEENT) problems. Also, you must have received at least two satisfactory ratings on how you:

- Obtain the medical history of a DEENT problem
- Do the physical examination for a DEENT problem
- Give patient education for DEENT problems
- Present health messages about DEENT problems

### **OBJECTIVES**

1. Diagnose all the DEENT problems described in this module.
2. Properly record information about medical history, physical examination and patient care.
3. Provide correct patient care, using the treatments described in this module.
4. Advise patients about the home care and prevention of DEENT problems.

### **LEARNING ACTIVITIES**

You will provide patient care, under supervision, for one week in the DEENT clinic.

During that time, your supervisor will help you identify and treat patients with DEENT problems. You will be expected to use Diagnostic and Patient Care Guides. You will have the chance to practice the patient care skills that were introduced in class.

## EVALUATION Level II

When you feel that you have had enough experience, ask your supervisor to evaluate you. He will do this using the Community Experience Log Book. The log book contains a list of the problems you will work with in the DEENT clinic. It also shows how many patients with DEENT problems you should see. As your supervisor watches you deal with a problem, he will write his rating in the log book. He will rate you in the following way for diagnosis and patient care:

- 1 = Diagnosis incorrect
- 2 = Diagnosis correct;  
      treatment incorrect
- 3 = Diagnosis and patient care correct;  
      no patient advice given
- 4 = Diagnosis, treatment and patient  
      advice correct

You will be expected to get at least a 4 rating.

You will be rated in the following way for Patient Care Procedures:

- 1 = Inadequate
- 2 = Needs improvement
- 3 = Satisfactory
- 4 = Above average
- 5 = Excellent

You will be expected to get at least a satisfactory rating.

## *Unit 10*

# **Assisting People in a Community To Care for and Prevent Dental, Eye, Ear, Nose, and Throat Problems**

## **STUDENT GUIDE**

### **ENTRY LEVEL**

Before you start your community experience, you must:

1. Score at least 80% on a test of your knowledge about dental, eye, ear, nose, and throat (DEENT) problems.
2. Complete a week of clinical experience in the DEENT clinic.
3. Score 4 on diagnosis, treatment and patient advising.
4. Earn at least a Satisfactory rating on patient care procedures.
5. Earn at least a Satisfactory rating on methods for teaching community health workers.
6. Earn at least a Satisfactory rating in presenting community health messages.

### **OBJECTIVES**

1. Provide clinical services to people who suffer from DEENT problems.
2. Identify infectious DEENT problems and plan a program to prevent them from occurring and spreading.
3. Advise the community about its role in preventing DEENT problems.
4. Identify other members of the health team who can assist in prevention.

## LEARNING ACTIVITIES

Your community experience will last three months. During that time, in addition to providing clinical services, you should:

1. Survey the community to identify the most common DEENT problems.
2. Identify any local customs that increase or decrease the occurrence of DEENT problems.
3. Meet with community members and enlist their help in preventive activities.
4. Prepare a community health worker to assist you in community education.

## EVALUATION

During your community experience, your supervisor will evaluate you. To do this, he will use the standards set out in the Community Experience Log Book.





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